

Self-Regulation of Negative Feedback in Vulnerable Narcissistic People

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### Abstract

Grandiose and vulnerable narcissism have been found to be two narcissistic subtypes who share high entitlement and self-esteem dysregulation, but differ in behavioral respects. Regarding the narcissistic response to negative feedback, individuals scoring high on a measure of grandiose narcissism respond with externalized aggression and other-derogation, whereas the literature on vulnerable narcissism is inconsistent. In three online studies ( $N = 703$ ), we investigated the vulnerable narcissistic response to negative feedback (compared to positive, neutral and no feedback) on an intelligence test and found a consistent pattern of high negative affect and self-focused rumination. In a fourth study in the laboratory ( $N = 40$ ), we investigated if the self-regulatory strategy of mental contrasting with implementation intentions (MCII) would help women scoring high on a measure of vulnerable narcissism to regulate their (internalized) negative affect and impulsive behavioral tendencies after receiving negative feedback on an intelligence test. Participants in the MCII condition showed significantly less negative affect and higher persistency in rerunning the failed intelligence test than participants who continued with self-focused rumination (dwelling control condition). The findings indicate that the vulnerable narcissistic response to negative feedback consists of high negative affect and self-focused rumination and can be buffered by a self-regulatory strategy which fosters adaptive response behavior.

*Keywords:* vulnerable narcissism, negative feedback, negative affect, mental contrasting with implementation intentions.

### Self-Regulation of Negative Feedback in Vulnerable Narcissistic People

In 2015, the American social media firm Facebook was discussing the implementation of a so-called “dislike-button” on their social networking web service. This button would have given Facebook users the opportunity to give negative feedback to their Facebook friends. Facebook chief executive officer Mark Zuckerberg commented: “People have asked about the dislike button for many years. We’ve finally heard you, and we’re working on this...” (Facebook working on ‘dislike button’, 2015). The idea of a possible dislike button sparked a debate in newspapers around the globe. In the end, Facebook decided not to implement a dislike button to avoid cyber-mobbing. However, this passionate discussion reveals the emotional explosiveness of negative feedback and symbolizes our ambivalent relation to feedback. On the one hand, we like the opportunity to receive positive feedback, but on the other hand, we are afraid to receive negative feedback that is a potential threat to the ideal notion that we have of ourselves.

This ambivalent relation to feedback is probably most visible in narcissistic people. They seek positive feedback as it gives them the opportunity to enhance themselves (Hepper, Hart, Gregg, & Sedikides, 2011; Wallace & Baumeister, 2002) but they respond to negative feedback with aggression and other-derogation. A recent and very popular example of this response to negative feedback is the President of the United States, Donald J. Trump. When U.S. District Judge James Robart blocked Trump’s immigration order in February 2017, Donald J. Trump responded: “The opinion of this so-called judge...is ridiculous and will be overturned!” (President Trump attacks ‘ridiculous’ ruling, 2017). By anger and other-derogation, highly narcissistic people try to defend their vulnerable self-concept (Morf & Rhodewalt, 2001).

However, not all highly narcissistic people respond in the same way to negative feedback. Social and personality psychology literature differentiate between grandiose and vulnerable narcissism (e.g., Miller et al., 2011; Rohmann, Neumann, Herner, & Bierhoff,

2012; Rose, 2002; Wink, 1991). While grandiose narcissism is associated with externalized aggression (Barry, Chaplin, & Grafeman, 2006; Martinez, Zeichner, Reidy, & Miller, 2008; Matsuo & DeSouza, 2016; Smalley & Stake, 1996; Vaillancourt, 2013) vulnerable narcissism is assumed to be associated with internalized negative affect (e.g., shame, guilt; Atlas & Them, 2008). However, findings on the vulnerable narcissistic response to negative feedback are sparse and inconsistent.

Therefore, in Studies 1 to 3 we focused on the affective and behavioral consequences of negative feedback in vulnerable narcissistic people. If vulnerable narcissism fosters (internalized) negative affect as a response to negative feedback, we should help vulnerable narcissistic people to better deal with negative feedback. In Study 4, we further tested if the self-regulatory strategy of *mental contrasting with implementation intentions* (MCII; Oettingen, 2012) displays a useful strategy for women scoring high on a measure of vulnerable narcissism to cope with negative feedback.

### **Negative Feedback**

Even if Facebook prevents its users from getting negative feedback, there are a lot of other situations in a person's life in which a person cannot prevent negative feedback. Children get graded in school, employees get performance feedback on their job and even in spare time people get feedback on how they play an instrument or how they perform on a sports team. Thus, negative performance feedback is inevitable. Due to its importance and frequency, our studies focus on negative *performance* feedback, which we simply refer to as negative feedback.

### **Task-Oriented versus Self-Oriented Processing**

Task-oriented processing focuses on the information important for performance improvement, whereas self-oriented processing focuses on the information relevant to the self (-esteem). Three sources impact the way the negative feedback is processed: Characteristics of the feedback itself (e.g., Hattie & Timperley, 2007), characteristics of the source of the

feedback (e.g., Fedor, Davis, Maslyn, & Mathieson, 2001) as well as of the recipient of the feedback (e.g., Buchanan & Seligman, 1995).

**Characteristics of the feedback itself.** Hattie and Timperley (2007) differ between four foci of feedback's content: First, *feedback about the task* contains concrete suggestions on how to improve one's performance (e.g., you need to include sex as a control variable). Feedback about the task is very task-focused and therefore fosters task-oriented processing.

Second, *feedback about the processing of the task* contains a more general suggestion for improvement (e.g., you need to think about your control variables). Feedback about the processing of the task is still very task-focused but implies a more general criticism. Therefore, it tends to breed a little more self-oriented processing than feedback about the task.

Third, *feedback about self-regulation* contains feedback about people's goal oriented self-regulation (e.g., you need to work harder). Feedback about self-regulation is rather self-oriented but is still task-relevant. Therefore, it is easily processed in a self-oriented way.

The fourth type of feedback is *feedback about the self as a person*. This feedback focuses on the evaluation of the person or the person's work (e.g., you are a low performer) and is often referred to as *normative feedback*. Feedback about the self as a person fosters self-oriented processing and diminishes task-oriented processing.

The influence of the characteristics of the feedback itself is supported by the theory of objective self-awareness (Duval & Wicklund, 1972) which states that feedback about the task would serve as a stimulus that directs attention to the environment (i.e., the task), whereas feedback about the self would serve as a stimulus that directs attention to the self. Therefore, the latter will increase self-oriented processing in the feedback situation.

**Characteristics of the feedback source.** Feedback is either provided by computers or persons. Person-mediated feedback leaves more room for source characteristics influencing the way the feedback is processed (Kluger & Adler, 1993). For example, if the person providing the feedback is perceived as an expert and role model, negative feedback is likely to



be processed in a task-oriented way (Fedor et al., 2001). In contrast, if the feedback source is perceived as incompetent, feedback is less likely to be accepted and more likely to be processed in a self-oriented way (Ilgen, Fischer, & Taylor, 1979).

**Characteristics of the recipient.** The characteristics of the feedback recipient influence the way the feedback is processed. For example, the level of self-focus, the attribution style, and implicit beliefs about the stability of abilities determine whether the feedback is processed in a more task- or more self-oriented way.

First, people, who are motivated by self-construction that is striving for an ideal self-concept, will process feedback more self-oriented than task-oriented (Morf & Rhodewalt, 2001). To those people, feedback is a source of self-information. In general, a higher self-focus (Carver, 1979) leads to changes in information processing in that self-relevant information is processed more deeply (e.g., Scheier, 1976; Scheier, Carver, & Gibbons, 1981).

Second, people who attribute negative feedback to unstable, task-specific factors (e.g., effort), will process the feedback more task-oriented, compared to people who attribute the feedback to stable, global factors (e.g., general ability). The latter is more self-oriented, less changeable and therefore counterproductive to performance improvement (Buchanan & Seligman, 1995).

Third, people who believe in the changeability of abilities (incremental belief) will focus on the improvement-relevant information of the feedback, whereas people who believe in the stability of abilities (entity belief) will focus on the self-relevant information (Dweck, 2000; Nussbaum & Dweck, 2008). Thus, people with an incremental belief are supposed to be more prone to the task-oriented processing of negative feedback, whereas people with an entity belief are supposed to be more prone to self-oriented processing.

In conclusion, the more normative the feedback, the more likely is it to be processed in a self-oriented instead of a task-oriented way. In addition, people with a high self-focus, a

high entity belief, and a global attribution style are more likely to process negative feedback in a self-oriented way. The named characteristics of the feedback, the source of the feedback and the recipient of the feedback interact with each other and finally lead to a level of self-oriented vs. task-oriented processing of the negative feedback (Figure 1).

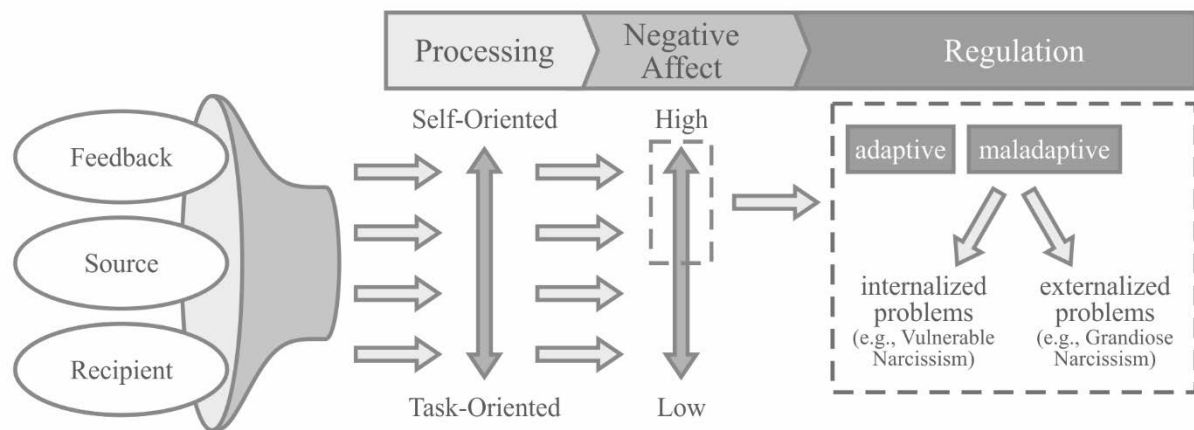


Figure 1. Model of the response to negative feedback.

### Negative Affect as Response to Negative Feedback

Self-oriented processing is associated with negative affect due to a perceived threat to self-esteem (Ickes, Wicklund, & Ferris, 1973; Ingram, Johnson, Bernet, Dombek, & Rowe, 1992; Mor & Winquist, 2002). As most of the studies investigating response behavior to negative feedback use *normative* feedback which fosters self-oriented processing, the literature proposes a direct association between negative feedback and negative affect (see Nummenmaa & Niemi, 2004 for a meta-analysis). Students described their reactions to bad grades as feeling blue, sad and unhappy (Kluger, Lewinsohn, & Aiello, 1994). And employees reacted to negative feedback with disappointment, frustration, and anger (Belschak & Den Hartog, 2009). Moreover, negative affect often mediates the relationship between negative feedback and behavior. Thus, negative affect after receiving negative feedback leads to lower goal setting and fosters counterproductive work behavior, turnover intention and lower organizational commitment (Belschak & Den Hartog, 2009; Ilies & Judge, 2005).

However, even if meta-analyses support a general tendency of people to respond to negative feedback with negative affect, the characteristics of the recipient are important moderators for this relationship. For example, low self-esteem is linked to high negative affect following negative feedback (e.g., Brown & Marshall, 2001). Furthermore, chronic self-focus is associated with high negative affect in response to negative feedback (e.g., Ingram et al., 1992). Similarly, neuroticism is associated with high negative affect following negative feedback (e.g., Larsen & Ketelaar, 1989), and ability attributions (i.e., entity belief and global attribution style) foster high negative affect in response to negative feedback (e.g., McFarland & Ross, 1982). These characteristics of the recipient are all associated with high self-oriented processing of the feedback.

In conclusion, we assume self-oriented processing to be a mediator between the characteristics of the feedback, the source and the recipient and negative affect (Figure 1). In the following, we were interested in how vulnerable narcissism as a characteristic of the recipient would be associated with self-oriented processing and negative affect.

### **Vulnerable Narcissism**

When we think of narcissism, we usually think of people like Donald J. Trump, who are self-confident, dominant, vain and superficial. However, early thoughts on narcissism already related the construct to low self-esteem (Freud, 1914/1957; Kohut, 1966), which might seem contradictory, but highlights the complexity of narcissism.

### **Self-Esteem Dysregulation**

Psychoanalysts first studied narcissism. They were concerned about patients with “a curious apparent contradiction between a very inflated concept of themselves and an inordinate need for tribute from others.” (Kernberg, 1985, p. 17). Thus, psychoanalysts already noted a discrepancy between an ideal grandiose self, which narcissistic people try to display and their perceived low self-esteem (Freud, 1914/1957; Kohut, 1966). Campbell and Miller (2011) described this discrepancy as *self-esteem dysregulation*.

In recent decades, clinical- and social and personality psychologists conducted a lot of studies supporting the problem of self-esteem dysregulation as the core aspect of the narcissistic dysfunction (e.g., Brown & Zeigler-Hill, 2004; Morf & Rhodewalt, 2001; Pincus, Cain, & Wright, 2014; Raskin, Novacek, & Hogan, 1991; Ronningstam, 2011). In their self-regulatory processing model, Morf and Rhodewalt (2001) suggested that the “grandiose yet vulnerable self-concept” (p. 177) in narcissistic people leads to their craving for external self-affirmation and their avoidance of ego threat. In contrast, people with a stable self-concept learn to cope with failure and disappointment.

Due to an increasing recognition of heterogeneity within the construct of narcissism, a two-factor structure was introduced which differentiates between grandiose and vulnerable narcissism (e.g., Given-Wilson, McIlwain, & Warburton, 2011; Miller et al., 2011; Wink, 1991). Ronningstam (2005a, 2005b) identifies the two subtypes based on their strategies to cope with self-esteem dysregulation. Whereas grandiose narcissistic people use dominance, aggression, exhibitionism and self-aggrandizement to defend themselves against threatening emotions such as anger, anxiety, and fear (e.g., Bushman & Baumeister, 1998; Rhodewalt & Morf, 1998), vulnerable narcissistic people feel shame regarding their needs and grandiose fantasies (Morrison, 1989). The grandiose type is approach oriented, whereas the vulnerable type is avoidance oriented (e.g., Elliot & Thrash, 2002). Thus, the different strategies to cope with their vulnerable self-concept are assumed to be the basis for behavioral and emotional differences between the two subtypes.

### **Internalizing Problems in Vulnerable Narcissism**

The vulnerable subtype which we focus on in our research is related to what Achenbach & Edelbrock (1991) defined as internalizing problems such as withdrawal, anxiety, depression or affect-dysregulation (Miller et al., 2017). Internalizing problems are inner-directed and correlate with low self-esteem.

**Withdrawal.** Vulnerable narcissism is highly associated with social inhibition (Given-Wilson et al., 2011) and anxious attachment styles (Miller et al., 2011; Rohmann et al., 2012). Moreover, vulnerable narcissism is negatively associated with extraversion (Hendin & Cheek, 1997; Miller et al., 2011), sociability and social presence (Wink, 1991). Thus, vulnerable narcissistic people tend to withdraw from social interaction, especially if they expect ego threat.

**Anxiety.** Vulnerable narcissism is highly related to neuroticism (Hendin & Cheek, 1997; Miller et al., 2017) and relates to phobic anxiety and paranoia (Miller et al., 2011). Moreover, spouses described their vulnerable narcissistic partner as anxious and tense (Wink, 1991). As a consequence of high anxiety, vulnerable narcissistic people are hypersensitive to interpersonal behavior.

**Depression.** Vulnerable narcissistic people are described as worrying, complaining and dissatisfied (Wink, 1991). Vulnerable narcissism is directly associated with depression and negative affect (Miller et al., 2011, Miller et al., 2017) and negatively associated with happiness and satisfaction in life (Rose, 2002). Thus, vulnerable narcissistic individuals tend to be dissatisfied with their situation, which explains why they often seek out for a therapist (Pincus et al., 2014).

**Affect-dysregulation.** Vulnerable narcissism is related to affect dysregulation (Given-Wilson et al., 2011; Zhang, Wang, You, Lü, & Luo, 2015). Affect regulation is defined as conscious or unconscious strategies to maximize pleasant or minimize unpleasant emotions (Westen, 1995). In more detail, Zhang et al. (2015) show that vulnerable narcissism is associated with non-acceptance of affective responses, where vulnerable narcissistic individuals feel guilty or ashamed for their emotions (Gratz & Roemer, 2004). Furthermore, they have difficulties engaging in goal-directed behavior, impulse control difficulties, limited access to emotion regulation strategies and lack emotional clarity (Zhang et al., 2015).

In summary, it is suggested that both subtypes of narcissism hold a dysregulation of self-esteem in that both subtypes have a constant need for self-affirmation on the one hand and a constant fear of threat to their self-concept on the other hand (e.g., Given-Wilson et al., 2011; Morf & Rhodewalt, 2001). However, the way they deal with ego threat is assumed to be different (e.g., Zhang et al., 2015). Whereas vulnerable narcissism is characterized by greater internalizing problems and psychological distress, grandiose narcissism is characterized by externalizing problems, especially anger and aggression following perceived ego threats (Miller et al., 2017). Therefore, both subtypes of narcissism are expected to differently regulate negative affect following negative feedback (Figure 1).

### **The Vulnerable Narcissistic Response to Negative Feedback**

Due to a high correlation with characteristics predicting self-oriented processing of negative feedback (i.e., neuroticism, low self-esteem), we expected vulnerable narcissism to be associated with high negative affect after receiving negative feedback. Moreover, we hypothesized vulnerable narcissism to be associated with internalizing problems (i.e., withdrawal, rumination) as a response to negative feedback (Garnefski, Kraaij, & van Etten, 2005).

A literature review on grandiose narcissism reveals aggression and other-derogation, associated with externalizing problems, as response to negative feedback (Barry, et al., 2006; Matsuo & DeSouza, 2016; Martinez et al., 2008; Rhodewalt & Morf, 1998; Smalley & Stake, 1996; Stucke, 2003; Stucke & Sporer, 2002; Vaillancourt, 2013). However, for vulnerable narcissism, the literature is less consistent. In one study, vulnerable narcissism was positively correlated with negative affect and expected rumination following positive, mixed and negative feedback (Atlas & Them, 2008). Thus, they found a main effect of vulnerable narcissism on negative affect independent of the feedback condition. Furthermore, vulnerable narcissism has been found to be associated with negative affect in an interpersonal threat scenario (rejection) but not in an achievement threat scenario (job loss; Besser and Priel,

2010). This finding is inconsistent with our hypothesis that performance feedback (i.e., achievement failure) will lead to negative affect in people with high vulnerable narcissism. However, hypothetical scenarios might differ from more naturalistic situations. Malkin, Barry, and Zeigler-Hill (2011) investigated the response on negative, positive and no feedback on a general knowledge quiz in adolescents and the influence of vulnerable narcissism. They revealed an interaction effect between vulnerable narcissism and feedback on shame. However, counter-intuitively, simple slopes showed the highest positive correlation between vulnerable narcissism and shame in the *positive* feedback condition. Finally, a recent study by Freis, Brown, Carroll and Arkin (2015) found no interaction effect between vulnerable narcissism and feedback (unsatisfactory, satisfactory) on either shame or anger but a 3-way interaction with self-evaluation as a covariate. Participants with high vulnerable narcissism showed high shame and anger as a response to unsatisfactory feedback when they evaluated their performance as good, whereas participants with low vulnerable narcissism did not show this interaction effect.

We expand Freis et al.'s (2015) work in many regards. First, we offer a (missing) theoretical framework (Figure 1) supporting the hypothesis that vulnerable narcissism would be correlated with negative affect in the negative feedback condition. Second, by increasing the sample size (in Studies 2 and 3), we enable finding the hypothesized interaction effect between vulnerable narcissism and feedback condition on negative affect. Third, we investigate response behavior (subsequent motivation and performance in Study 1, expected rumination in Studies 2 and 3) to shed light on behavioral consequences of negative feedback in people with high vulnerable narcissism.

### **Studies 1 to 3**

In Studies 1 to 3, we aimed to test if vulnerable narcissism is associated with negative affect and internalizing problems (i.e., rumination or withdrawal) following negative feedback compared to neutral, positive or no feedback. We conducted three online studies in which

participants received bogus feedback (positive, negative, neutral) or no feedback on their performance on an intelligence test. Intelligence tests are often used to manipulate success or failure (Nummenmaa & Niemi, 2004). The feedback manipulations did not differ across the three studies regarding feedback source (computer-mediated) or feedback type (normative) to control for any other factor but recipients' characteristics. As dependent variables, we measured negative affect as well as rumination, and motivation and performance on a subsequent task as indicators for internalizing problems.

### **Study 1**

According to our theoretical framework, vulnerable narcissism should be positively correlated with negative affect following negative feedback due to their self-oriented processing of the feedback. Moreover, vulnerable narcissism should be associated with internalizing problems (i.e., rumination and withdrawal). In Study 1, we tested two different feedback conditions (negative and neutral) in a between-subject design. We assessed participants' negative affect as dependent variable. In addition, withdrawal was operationalized by participants' motivation to perform well on a subsequent task (anagram task) with low motivation indicating withdrawal and high motivation indicating approach behavior.

As we assumed that neutral feedback would be less ego threatening than negative feedback, we expected to find an interaction effect between vulnerable narcissism and feedback condition on negative affect in that vulnerable narcissism would be associated with high negative affect in the negative feedback condition but not in the neutral feedback condition (hypothesis 1). Furthermore, we expected to find an interaction effect of vulnerable narcissism and feedback condition on the motivation to perform well on a subsequent task with low motivation (i.e., withdrawal) indicating internalizing problems and maladaptive affect regulation (Brown Westbrook, & Challagalla, 2005). Therefore, if vulnerable narcissism is associated with maladaptive affect regulation in ego threatening feedback



situations, we would expect vulnerable narcissism to be correlated with low motivation to perform on the subsequent task following negative feedback but not following neutral feedback (hypothesis 2). This interaction effect should be transferred to the performance on the subsequent task in that vulnerable narcissism would be correlated with low performance after receiving negative feedback but not after receiving neutral feedback (hypothesis 3).

We controlled for the self-reported importance to perform well in the intelligence test since low importance should decrease the affective response to the received feedback whereas high importance should increase the affective response (Moberly & Watkins, 2010; van Dijk & van der Pligt, 1997). Furthermore, after finishing the intelligence test, we asked participants to state how well they think they did in the task. We wanted to control for participants' self-evaluation of their performance as this factor was found to influence the affective response to negative feedback. A high discrepancy between self-evaluation and actual feedback leads to high negative affect (Freis et al., 2015; Kluger, Lewinsohn, & Aiello., 1994).

## **Method**

### **Participants**

Participants were recruited via the online platform Amazon Mechanical Turk (www.mturk.com; Buhrmester, Kwang, & Gosling, 2011). Following the sample sizes of former work (e.g., Freis et al., 2015) a total of 102 MTurk workers (52% female, 47% male, 1% other) completed the study in return for payment. Participants' mean age was  $M = 35.38$  years ( $SD = 12.55$ ,  $min = 19$ ,  $max = 74$ ). The sample mostly consisted of people who were born in the United States of America (98%), and 89.2% stated to have a college degree or higher.

### **Materials and Procedure**

After consenting to take part in the study, participants were told that we were interested in the relation between intelligence and creativity. Therefore, they were going to complete an intelligence test, followed by a creativity task. Participants were informed that

intelligence is a strong predictor of academic success, psychological health and a longer lifetime and that they were going to get feedback on how they performed compared to other participants in a previous study.

To measure individual importance of the task, participants were asked “How important is it to you to perform well in the following intelligence test?” They answered the question on a slider from 1 (*not at all important*) to 100 (*very important*). Afterward, participants completed a brief intelligence test. The test material was taken from the I-S-T 2000R (Liepmann, Beauducel, Brocke, & Amthauer, 2007). The I-S-T 2000R short version measures numeric-, figural- and verbal intelligence. Participants had to solve ten arithmetic problems, ten figural problems and ten verbal problems within a predefined period (7 minutes). To measure self-evaluation, after finishing the intelligence test, we asked participants “How well do you think you performed on the intelligence test?” on a slider from 1 (*very poor*) to 100 (*very good*).

**Feedback manipulation.** Subsequently, participants were randomly assigned to the neutral feedback condition ( $n = 52$ ), or to the negative feedback condition ( $n = 50$ ). Participants waited twelve seconds to get either neutral- or negative feedback on the intelligence test. Participants in the neutral feedback group read: “Well done! Your performance was *average!* 82 % of participants who completed this intelligence task in a previous study had a *similar score* like you.” Participants in the negative feedback group read: “Sorry! Your performance was *below average!* 82 % of participants who completed this intelligence task in a previous study *performed better* than you.”

**Negative affect.** To measure negative affect, participants were asked to state their current feeling on the Self-Assessment Manikin (SAM; Bradley & Lang, 1994) and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). By doing so, we measured affect in a non-verbal and in a verbal way.

The SAM is a non-verbal pictorial assessment technique which measures the valence, arousal, and dominance of a person's affective response to a stimulus. The valence measure displays five different manikins ranging from a smiling manikin to a sad manikin. Participants rate their feeling on a 9-point scale with nine stating the most negative valence. The arousal measure displays five manikins ranging from a wide-eyed, excited manikin to a calm manikin with closed-eyes. Finally, the dominance measure displays five manikins ranging from a very small, submissive manikin to a very large, dominant manikin. To measure negative affect, we focused on the valence measure; dominance and arousal served as distractor items to mask our hypothesis.

The PANAS is a widely used verbal measure of positive and negative affect. People rated 20 items (10 positive adjectives, e.g. *interested*; 10 negative adjectives, e.g. *distressed*) on a 5-point scale (1 = *very slightly or not at all* and 5 = *extremely*). The ten positive adjectives and the ten negative adjectives were combined to a positive affect score ( $\alpha = .91$ ) and a negative affect score ( $\alpha = .91$ ). In our analysis, we focused on the negative affect score.

**Subsequent motivation and performance.** Next, participants were introduced to a subsequent task (an anagram task) to test their subsequent motivation. Before they started the task, participants were asked "How motivated are you to perform well in the following test?" on a slider from 1 (*not motivated at all*) to 100 (*very motivated*). Then they completed the anagram task which took 3 minutes. As a performance measure, we counted the words participants had found by rearranging the letters of the given words.

**Vulnerable narcissism and demographic variables.** The Maladaptive Covert Narcissism Scale (MCNS; Cheek, Hendin, & Wink, 2013) was used to measure vulnerable narcissism. The MCNS is an advancement of the widely used Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) which contains 23 items ( $\alpha = .93$ ). Participants were instructed to decide to what extent each item was characteristic of their feelings and behavior on a 5-point scale (1 = *very uncharacteristic* and 5 = *very characteristic*). Sample items

include “My feelings are easily hurt by ridicule or by slighting remarks of others” and “I can become entirely absorbed in thinking about my personal affairs, my health, my cares or my relations to others.”

In the end, we assessed the demographic variables (age, sex, education, country of birth, mother tongue) and asked for comments on the study. Participants were then given a chance to indicate if they did not believe in the feedback. Finally, we thanked participants for their participation and debriefed them.

### **Results**

Independent t-tests revealed no pre-feedback differences between the two feedback conditions (negative and neutral) regarding the importance to perform well,  $t(100) = 0.71$ ,  $p = .483$  and the self-evaluation following the intelligence test,  $t(100) = 0.60$ ,  $p = .552$ .

Moreover, the two feedback conditions did not differ in vulnerable narcissism,  $t(100) = 1.15$ ,  $p = .251$ , age  $t(100) = 0.39$ ,  $p = .698$ , or gender distribution  $\chi^2(2, 102) = 1.42$ ,  $p = .492$ . See Table 1 in the Appendix for means and standard deviations.

### **Manipulation Check**

The manipulation check revealed the expected differences in affect after participants had received the feedback manipulation. Participants in the negative feedback condition indicated a higher negative affect, compared to people in the neutral feedback condition, (SAM)  $t(100) = 4.72$ ,  $p < .001$ , (PANAS)  $t(100) = 2.30$ ,  $p = .024$ . However, participants in the two conditions did not differ regarding their subsequent motivation,  $t(100) = 0.71$ ,  $p = .478$ , or performance  $t(100) = 0.03$ ,  $p = .977$ . See Table 1 in the Appendix for means and standard deviations.

### **The Role of Vulnerable Narcissism**

To test the role of vulnerable narcissism, we conducted a moderation analysis using the PROCESS macro for SPSS (Model 1; Hayes, 2013) in which we entered vulnerable narcissism as a continuous independent variable, negative affect as the dependent variable and

feedback as the moderator. We controlled for the importance to perform well in the intelligence test and the self-evaluation following the intelligence test. All variables were z-standardized for the analyses to receive standardized coefficients (Aiken, West, & Reno, 1991).

**Negative affect.** With respect to negative affect (SAM), we found main effects of feedback condition,  $b = 0.47$ ,  $t(96) = 5.58$ ,  $p < .001$  and vulnerable narcissism,  $b = 0.24$ ,  $t(96) = 2.86$ ,  $p = .005$ . The expected interaction effect between vulnerable narcissism and feedback condition was marginally significant,  $b = 0.15$ ,  $t(96) = 1.78$ ,  $p = .078$ , implying that a combination of high vulnerable narcissism and negative feedback predicted high negative affect (Figure 2).

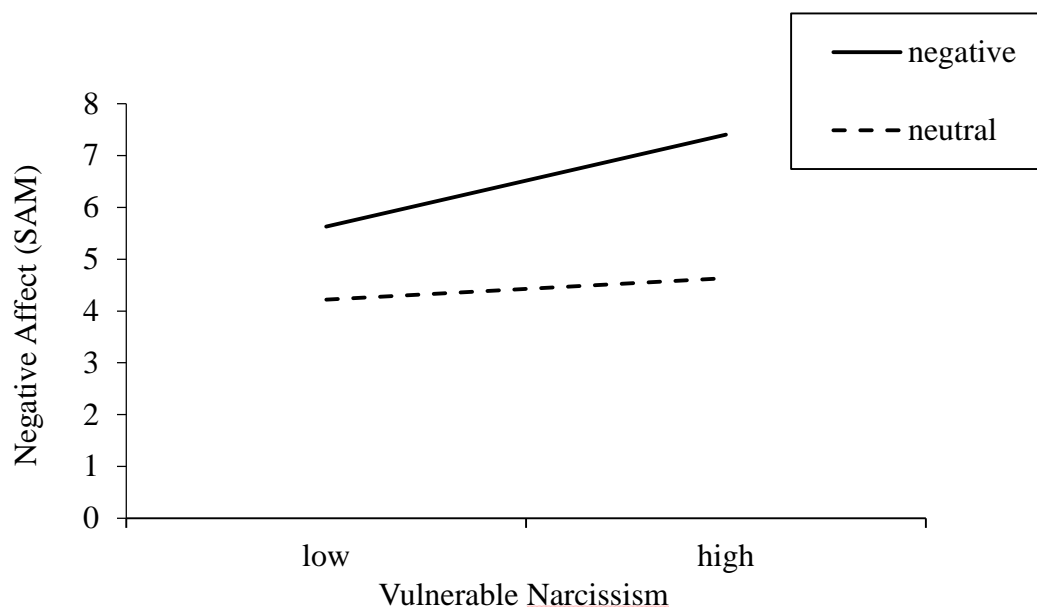


Figure 2. Interaction between vulnerable narcissism and feedback condition in the prediction of negative affect (SAM).

The interaction effect accounted for 2.2 % of the variance in negative affect (SAM),  $F(1, 96) = 3.18$ ,  $p = .078$ . Simple slopes analysis revealed a significant relation between vulnerable narcissism and negative affect (SAM) in the negative feedback condition,  $b = 0.40$ ,  $t(96) = 3.49$ ,  $p < .001$  but not in the neutral feedback condition,  $b = 0.01$ ,  $t(96) = .72$ ,  $p = .475$ .

This finding supports our first hypothesis regarding an interaction effect of vulnerable narcissism and feedback condition on negative affect.

Regarding negative affect (PANAS), we found main effects of feedback condition,  $b = 0.28$ ,  $t(96) = 3.29$ ,  $p = .002$  and vulnerable narcissism  $b = 0.48$ ,  $t(96) = 5.42$ ,  $p < .001$ , but not the expected interaction effect,  $b = 0.08$ ,  $t(96) = 1.07$ ,  $p = .287$ . Thus, vulnerable narcissism predicted negative affect (PANAS) independent of the feedback condition. Simple slopes analysis revealed significant conditional effects of vulnerable narcissism on negative affect (PANAS) in the negative feedback condition,  $b = 0.56$ ,  $t(96) = 5.17$ ,  $p < .001$  and in the neutral condition, respectively,  $b = 0.39$ ,  $t(96) = 3.55$ ,  $p < .001$  (Figure 3 in the Appendix). Thus, our first hypothesis regarding the interaction between vulnerable narcissism and feedback was only supported for negative affect (SAM) but not for the PANAS measure of negative affect.

**Subsequent motivation and performance.** Finally, we found no interaction effect of vulnerable narcissism and feedback condition on the motivation for the subsequent anagram task,  $b = -0.06$ ,  $t(96) = 0.60$ ,  $p = .551$  but vulnerable narcissism again showed a marginally significant main effect,  $b = -0.19$ ,  $t(96) = 1.90$ ,  $p = .055$ , indicating that vulnerable narcissism is correlated with low motivation in a subsequent task independent of the feedback condition (Figure 4 in the Appendix). Moreover, the actual performance was neither influenced by vulnerable narcissism or feedback condition nor by an interaction of both,  $R^2 = 0.02$ ,  $F(5, 96) = 0.45$ ,  $p = .814$  (Figure 5 in the Appendix). Therefore, hypotheses 2 and 3 were not supported by our data.

## Discussion

In Study 1, we found support for our first hypothesis stating that high vulnerable narcissism is associated with a highly negative affective experience when receiving negative feedback. Interestingly, a difference between the two feedback conditions only became visible for the SAM measure but not for the PANAS measure. Vulnerable narcissism was associated

with negative affect on the PANAS measure in both feedback conditions. This tendency might represent the general tendency of people with high vulnerable narcissism to show depressive symptoms (e.g., Miller et al., 2017; Rose, 2002, Wink, 1991). While the SAM measure is not related to depression (Sloan, Strauss, Quirk, & Sajatovic, 1997; Sloan, Strauss, & Wisner, 2001), the PANAS measure shows medium to high correlations with depression scales (Watson et al., 1988). Therefore, the different representation of depressive symptoms in the two measures might account for the results.

Regarding the motivation to perform well in the subsequent anagram task, we found no influence of the feedback condition, but instead a main effect of vulnerable narcissism in that vulnerable narcissism was negatively associated with motivation. This main effect could be driven by a proneness to avoidance motivation in vulnerable narcissistic people (Elliot & Thrash, 2002; Foster & Trimm, 2008). Avoidance motivation is the tendency to avoid undesirable outcomes (e.g., failure in a task, Elliot & Church, 1997). Moreover, in contrast to Brown et al. (2005), we found no relation between either of our predictor variables and performance. Thus, the lower motivation in vulnerable narcissistic participants did not influence their performance. As performance is a complex construct with many predictors, not only person-related (see Judge & Bono, 2001) but also task-related (e.g., Wood, Mento, & Locke, 1987) it is difficult to speculate what might have been causing this result. Therefore, in Studies 2 and 3 we focused on rumination instead of motivation and performance as an indicator for internalizing problems (Garnefski et al., 2005; Garnefski & Kraaij, 2006).

Furthermore, the neutral feedback might have been a poor control condition as it allows people to interpret the feedback in various ways (either inadequate or adequate). Therefore, in Studies 2 and 3 we added a positive feedback condition to our design to be able to discriminate between two clearly distinct feedback conditions (positive and negative).

## Study 2

In contrast to negative or neutral feedback, positive feedback is expected to compensate self-esteem dysregulation in narcissistic people by making them stand out (Morf & Rhodewalt, 2001; Wallace & Baumeister, 2002). This could affect the depressive tendencies in people with high vulnerable narcissism and influence the scoring on the PANAS scale. Therefore, in Study 2 we expected to find an interaction effect of vulnerable narcissism and feedback condition on negative affect for both measures (SAM and PANAS) in that vulnerable narcissism would be more positively related to negative affect in the negative feedback condition than in the positive feedback condition (hypothesis 1).

As a dependent variable in addition to negative affect (SAM) and negative affect (PANAS), we assessed expected rumination after receiving the feedback. In our studies, rumination is defined as “repetitive thoughts generated by attempts to cope with self-discrepancy that are directed primarily toward processing the content of self-referent information and not toward immediate goal-directed action” (Matthews & Wells, 2004, p. 131). Rumination is associated with internalizing problems and maladaptive affect regulation abilities (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Garnefski et al., 2005; Garnefski & Kraaij, 2006; Joormann & Gotlib, 2010). Expected rumination has found to be high in vulnerable narcissistic people following feedback (Atlas & Them, 2008). According to this general tendency, we expected a relation between vulnerable narcissism and expected rumination in all three feedback conditions. However, in the negative feedback condition differences between low and high vulnerable narcissism should be eminent in that low vulnerable narcissism would predict low expected rumination and high vulnerable narcissism would predict high expected rumination. Therefore, we hypothesized to find an interaction effect between vulnerable narcissism and feedback condition (negative vs. other two conditions) on expected rumination (hypothesis 2).



For exploratory analyses we further assessed self-esteem, psychological entitlement and implicit belief (entity vs. incremental) to be able to test for their influence on our dependent variables. All three variables should be correlated with vulnerable narcissism (see Da Fonseca et al., 2009; Dweck, 2000; Krizan & Herlache, 2017) and could explain in parts the vulnerable narcissistic response to negative feedback (Tamir, John, Sanjay, & Gross, 2007).

## Method

### Participants

Participants were recruited via the online platform Amazon Mechanical Turk. The a priori sample size calculation with G\*Power (Faul, Erdfelder, Buchner, & Lang, 2009) yielded a sample size of 277 participants to detect a small-sized interaction effect with a power criterion of .80. To account for potential study dropouts, we recruited a total of 300 MTurk workers (58% female, 42% male) who completed the study in return for payment. Participants' mean age was  $M = 39.27$  years ( $SD = 13.51$ ,  $min = 18$ ,  $max = 75$ ). The sample consisted of people who were mostly born in the United States of America (95%), and 89.7% stated to have a college degree or higher.

### Materials and Procedure

Participants were told that we were interested in the relation between intelligence and personality. After consenting to take part in the study, participants completed questionnaires on vulnerable narcissism, self-esteem, psychological entitlement as well as their implicit belief.

**Vulnerable narcissism.** As in Study 1, the Maladaptive Covert Narcissism Scale (MCNS; Cheek et al., 2013) was used to measure vulnerable narcissism ( $\alpha = .93$ ).

**Self-esteem.** The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure general self-esteem. The scale consists of ten items ( $\alpha = .92$ ) with items answered on

a 4-point scale (1 = *strongly disagree* and 4 = *strongly agree*). Sample items include “At times I think I am not good at all” (reverse item) or “I feel that I am a person of worth.”

**Psychological entitlement.** To assess psychological entitlement we used the Psychological Entitlement Scale (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). This scale contains nine items ( $\alpha = .91$ ) with items answered on a 7-point scale (1 = *strongly disagree* and 7 = *strongly agree*). Sample items include “I demand the best because I am worth it” or “Things should go my way.”

**Implicit belief.** The implicit belief was measured with the Implicit Theory of Intelligence Measure (Dweck, Chiu, & Hong, 1995) consisting of three items ( $\alpha = .95$ ). The three items include “You have a certain amount of intelligence, and you really can’t do much to change it,” “Your intelligence is something about you that you can’t change very much” and “You can learn new things, but you can’t really change your basic intelligence.” Participants answered on a 6-point scale (1 = *strongly disagree* and 6 = *strongly agree*) with higher scores indicating a stronger entity belief (vs. incremental belief).

As in Study 1, participants were informed that intelligence is a strong predictor of academic success, psychological health and a longer lifetime and that they were going to get feedback on how they performed compared to other participants in a previous study. Then participants completed a brief intelligence test. The test material was identical to the material used in Study 1. Participants had to solve ten arithmetic problems, ten figural problems and ten verbal problems within a predefined period (7 minutes). Consistent with Study 1, we asked participants to state how important it was to them to perform well in the intelligence test (before the test) and how well they think they did in the task (after the test).

**Feedback manipulation.** Subsequently, participants waited twelve seconds to get feedback on the intelligence test. Participants were randomly assigned to the neutral feedback condition ( $n = 101$ ), the negative feedback condition ( $n = 98$ ) or the positive feedback condition ( $n = 101$ ). Participants in the neutral feedback group read: “Well done! Your

performance was *average!* 82 % of participants who completed this intelligence task in a previous study had a *similar score* like you.” Participants in the negative feedback group read: “Sorry! Your performance was *below average!* 82 % of participants who completed this intelligence task in a previous study *performed better* than you.” Participants in the positive feedback group read: “Congratulations! Your performance was *above-average!* You *performed better* than 82 % of participants who completed this intelligence task in a previous study.”

**Negative affect.** As in Study 1, participants were asked to state their current feeling on the Self-Assessment Manikin (SAM; Bradley & Lang, 1994) and the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The ten positive adjectives and the ten negative adjectives were combined to a positive affect score ( $\alpha = .92$ ) and a negative affect score ( $\alpha = .92$ ).

**Expected rumination.** To measure expected rumination, we asked participants “How much do you expect to keep thinking about your performance?” This item was self-generated according to Atlas & Them (2008) and answered on a 7-point scale (1 = *not much* and 7 = *a lot*). In the end, we assessed the demographic variables age, sex, education, country of birth and mother tongue, and asked for comments on the study. Participants were then given a chance to indicate if they did not believe in the feedback. Finally, we thanked participants for their participation and debriefed them.

## Results

We conducted one-way ANOVAs to test for pre-feedback differences within the three feedback conditions. There was no significant difference in variance regarding the importance to perform well in the intelligence test,  $F(2, 297) = 0.47, p = .628$  and the self-evaluation following the intelligence test,  $F(2, 297) = 0.66, p = .520$ . Moreover, the three feedback conditions did not significantly differ in their mean entity belief,  $F(2, 297) = 0.46, p = .634$ , psychological entitlement,  $F(2, 297) = 0.84, p = .433$  as well as self-esteem,  $F(2, 297) = 1.92,$

$p = .149$ , age  $F(2, 297) = 0.45$ ,  $p = .639$  and gender distribution  $\chi^2(2, 300) = 0.78$ ,  $p = .679$ .

However, participants in the positive feedback condition differ from the two other conditions in vulnerable narcissism  $F(2, 297) = 3.00$ ,  $p = .051$ . See Table 2 in the Appendix for means and standard deviations.

### Manipulation Check

The manipulation check revealed the expected differences in negative affect after participants had received the feedback manipulation. One-way ANOVAs indicated inter-conditional differences in variance regarding negative affect (SAM),  $F(2, 297) = 60.54$ ,  $p < .001$  and negative affect (PANAS),  $F(2, 297) = 9.59$ ,  $p < .001$ . We found no difference between conditions for expected rumination  $F(2, 296) = .88$ ,  $p = .415$ . See Table 2 in the Appendix for means and standard deviations.

### The Role of Vulnerable Narcissism

As in Study 1, we conducted a moderation analysis using the PROCESS macro for SPSS (Model 2; Hayes, 2013) in which we entered vulnerable narcissism as a continuous independent variable and feedback as two dummy coded factor variables (F1 and F2). F1 accounted for the difference between the negative and the positive condition, F2 accounted for the difference between the negative and the neutral condition. Furthermore, we controlled for the importance to perform well in the intelligence test and the self-evaluation following the intelligence test. As in Study 1, all variables were z-standardized for the analyses to receive standardized coefficients (Aiken et al., 1991).

**Negative affect.** With respect to negative affect (SAM) we found the expected interaction effects between vulnerable narcissism and feedback condition F1 (negative vs. positive),  $b = -0.24$ ,  $t(292) = 2.19$ ,  $p = .030$  and F2 (negative vs. neutral),  $b = -0.36$ ,  $t(292) = 3.27$ ,  $p = .001$ . The two interaction terms as a set accounted for 2.31% of the variance in negative affect (SAM),  $F(2, 292) = 5.67$ ,  $p = .004$ . Simple slopes revealed a significant conditional effect of vulnerable narcissism on negative affect (SAM) in the negative feedback

condition  $b = 0.33$ ,  $t(292) = 4.34$ ,  $p < .001$  but not in the neutral  $b = -0.04$ ,  $t(292) = 0.43$ ,  $p = .669$  or positive feedback condition  $b = 0.08$ ,  $t(292) = 1.00$ ,  $p = .317$  (Figure 6).

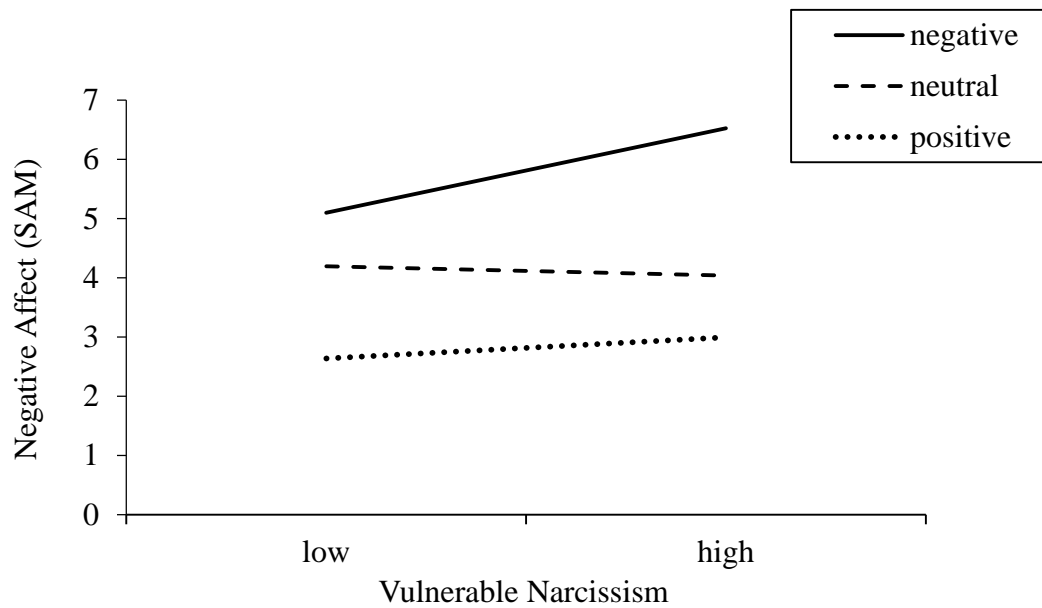


Figure 6. Interaction between vulnerable narcissism and feedback condition in the prediction of negative affect (SAM).

Regarding the dependent variable of negative affect (PANAS), we found a main effect of vulnerable narcissism on negative affect (PANAS),  $b = 0.51$ ,  $t(292) = 6.17$ ,  $p < .001$  and no interaction effect between vulnerable narcissism and feedback condition F2 (negative vs. neutral) which is consistent with our findings in Study 1. However, as hypothesized, the interaction effect between vulnerable narcissism and feedback condition F1 (negative vs. positive) was significant,  $b = -0.28$ ,  $t(292) = 2.29$ ,  $p = .023$ . The two interaction terms together accounted for 1.95% of the variance in negative affect (PANAS),  $F(2, 292) = 4.01$ ,  $p = .019$ . Therefore, as expected, adding a positive feedback condition allows for an interaction to occur as the conditional effect is significantly higher in the negative feedback condition,  $b = 0.51$ ,  $t(292) = 6.16$ ,  $p < .001$  compared to the positive feedback condition,  $b = 0.23$ ,  $t(292) = 2.54$ ,  $p = .012$  (Figure 7). Thus, our first hypothesis, stating that vulnerable narcissism would be positively related to negative affect in the negative feedback condition but not in the positive feedback condition, was fully supported.

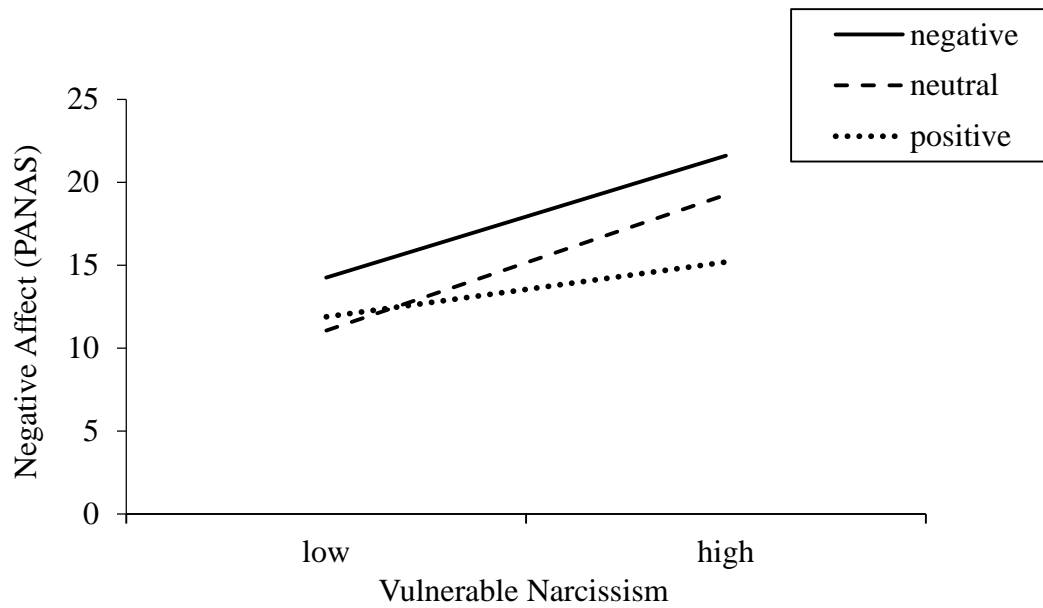


Figure 7. Interaction between vulnerable narcissism and feedback condition in the prediction of negative affect (PANAS).

**Expected rumination.** We found no significant interaction effect of vulnerable narcissism and feedback condition on expected rumination,  $\Delta R^2 = 0.007$ ,  $F(2, 291) = 1.57$ ,  $p = .211$  but a main effect of vulnerable narcissism in that people high on vulnerable narcissism generally expected to ruminate more on their performance than people low on vulnerable narcissism,  $b = 0.39$ ,  $t(291) = 4.71$ ,  $p < .001$  (Figure 8 in the Appendix). Thus, we found the expected general tendency but our second hypothesis was not supported.

### Exploratory Analyses

As expected, vulnerable narcissism was negatively correlated with self-esteem,  $r(300) = -.63$ ,  $p < .001$ , and positively associated with entity belief,  $r(300) = .31$ ,  $p < .001$  as well as psychological entitlement  $r(300) = .42$ ,  $p < .001$ . Moreover, self-esteem, psychological entitlement, and entity belief were correlated with our dependent variables, negative affect and expected rumination (Table 3 in the Appendix). Therefore, we conducted our moderation analyses again, controlling for self-esteem, psychological entitlement, and entity belief individually.

We found interaction effects of vulnerable narcissism and feedback condition on negative affect (SAM),  $\Delta R^2 = 0.021$ ,  $F(2, 291) = 5.30$ ,  $p = .006$  and negative affect (PANAS),  $\Delta R^2 = 0.019$ ,  $F(2, 291) = 4.12$ ,  $p = .017$  controlling for self-esteem. Furthermore, vulnerable narcissism explained variance in expected rumination over and above self-esteem,  $b = 0.36$ ,  $t(291) = 3.74$ ,  $p < .001$ . Moreover, we found interaction effects of vulnerable narcissism and feedback condition on negative affect (SAM),  $\Delta R^2 = 0.024$ ,  $F(2, 291) = 5.96$ ,  $p = .003$  and negative affect (PANAS),  $\Delta R^2 = 0.021$ ,  $F(2, 291) = 4.21$ ,  $p = .016$  controlling for psychological entitlement and vulnerable narcissism explained variance in expected rumination over and above psychological entitlement,  $b = 0.36$ ,  $t(291) = 3.74$ ,  $p < .001$ . Finally, we found interaction effects of vulnerable narcissism and feedback condition on negative affect (SAM),  $\Delta R^2 = 0.023$ ,  $F(2, 291) = 5.71$ ,  $p = .004$  and negative affect (PANAS),  $\Delta R^2 = 0.019$ ,  $F(2, 291) = 3.90$ ,  $p = .021$  controlling for entity belief. Moreover, vulnerable narcissism explained variance in expected rumination over and above entity belief,  $b = 0.38$ ,  $t(291) = 4.53$ ,  $p < .001$ .

### Discussion

In Study 2, we found further support for our hypothesis that vulnerable narcissism is associated with high negative affect following negative feedback. In contrast to Study 1, we found interaction effects of vulnerable narcissism and feedback condition on both affect measures, negative affect (SAM) and negative affect (PANAS) because we allowed for a third feedback condition: positive feedback. Our results suggest that positive feedback could have helped to compensate for depressive tendencies in participants high on our measure of vulnerable narcissism and therefore diminished the positive association between vulnerable narcissism and the more depression relevant PANAS measure. This finding supports the lines of literature stating that narcissistic people are constantly in need for affirmation (i.e., self-esteem dysregulation; Brown & Zeigler-Hill, 2004; Morf & Rhodewalt, 2001; Pincus et al.,

2014; Raskin et al., 1991; Ronningstam, 2011). This personal affirmation is only provided by positive feedback not by neutral and of course not by negative feedback.

Regarding the expected rumination following negative feedback, we found a main effect of vulnerable narcissism in that participants high on our measure of vulnerable narcissism expected to ruminate more on their performance in the intelligence test than participants low on our measure of vulnerable narcissism. This finding is consistent with Atlas and Them (2008). The expected interaction effect with feedback condition did not become significant; however, negative feedback revealed the highest difference in expected rumination between high and low vulnerable narcissism. In fact, participants low on our measure of vulnerable narcissism indicated to ruminate less in the negative than in the neutral or positive feedback condition, which might suggest that they try to forget about the negative performance and think about more positive things (i.e., adaptive affect regulation, less internalizing problems). Participants high on our measure of vulnerable narcissism did not show this adaptive reaction to the situation (i.e., maladaptive affect regulation, internalizing problems).

Moreover, our exploratory analyses suggested that the interaction between vulnerable narcissism and feedback condition explained variance in negative affect over and above self-esteem, psychological entitlement and entity belief. Also, vulnerable narcissism explained variance in expected rumination over and above self-esteem, psychological entitlement and entity belief.

A limitation of this study is that participants in the positive feedback condition scored significantly lower on vulnerable narcissism than participants in the neutral or the negative feedback condition. Therefore, the results need to be replicated in a sample without pre-conditional differences in vulnerable narcissism.



### Study 3

In Study 3, we wanted to account for a no feedback condition instead of the neutral feedback condition to test the influence of uncertainty about the performance. No feedback is associated with high uncertainty about the performance, which has been shown to promote negative affect in narcissistic people (Martinez et al., 2008). Therefore, we hypothesized that only positive feedback would compensate for depressive tendencies in people with high vulnerable narcissism. In contrast, negative, neutral and no feedback would show positive correlations between vulnerable narcissism and negative affect. Thus, we expected interaction effects between positive feedback and no feedback regarding both measures of negative affect (hypothesis 1). Furthermore, we expected to replicate the interaction effects from Study 2 of vulnerable narcissism and feedback condition between positive and negative feedback on both measures of negative affect (hypothesis 2).

As in Study 2, we hypothesized that in the negative feedback condition (but not in the positive or no feedback condition) participants with low vulnerable narcissism would ruminate less than participants with high vulnerable narcissism. Thus, we expect an interaction effect of vulnerable narcissism and feedback condition between no feedback and negative feedback on expected rumination (hypothesis 3).

As in Study 2, we assessed self-esteem, psychological entitlement and implicit belief (entity vs. incremental) for exploratory analyses.

### Method

#### Participants

As in Studies 1 and 2, participants were recruited via the online platform Amazon Mechanical Turk. A total of 301 MTurk workers (66.8% female, 33.2% male) completed the study in return for payment. Participants' mean age was  $M = 38.43$  years ( $SD = 12.34$ ,  $min = 19$ ,  $max = 75$ ). The sample mostly consisted of people who were born in the United States of America (94.7%), and 86.7% stated to have a college degree or higher.

## Materials and Procedure

As in Study 2, participants were told, that we were interested in the relation between intelligence and personality. After consenting to take part in the study, participants completed questionnaires on vulnerable narcissism, self-esteem, psychological entitlement as well as their implicit belief.

**Vulnerable narcissism.** As in Study 1 and 2, the Maladaptive Covert Narcissism Scale (MCNS; Cheek et al., 2013) was used to measure vulnerable narcissism ( $\alpha = .91$ ).

**Self-esteem.** As in Study 2, the Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure general self-esteem ( $\alpha = .93$ ).

**Psychological entitlement.** As in Study 2, we used the Psychological Entitlement Scale (Campbell et al., 2004) to assess psychological entitlement ( $\alpha = .90$ ).

**Implicit belief.** As in Study 2, the Implicit Theory of Intelligence Measure (Dweck et al., 1995) was used to assess entity belief vs. incremental belief ( $\alpha = .95$ ).

As in Studies 1 and 2, participants were informed that intelligence is a strong predicting factor for academic success, psychological health and a longer lifetime and that they were going to get feedback on how they performed compared to other participants in a previous study. Then participants completed a brief intelligence test. The test material was identical to the material used in Studies 1 and 2. Participants had to solve ten arithmetic problems, ten figural problems and ten verbal problems within a predefined period (7 minutes). Consistent with Studies 1 and 2, we asked participants to state how important it was to them to perform well in the intelligence test (before the test) and how well they think they did in the task (i.e., self-evaluation, after the test).

**Feedback manipulation.** Participants were randomly assigned to the no feedback condition ( $n = 101$ ), the negative feedback condition ( $n = 102$ ) or the positive feedback condition ( $n = 98$ ). Before they start the test, participants in the no feedback condition read: “Please note that the intelligence test is in its validation phase. Therefore, it will not provide

you with an IQ score. We simply ask you to complete the tasks in all conscience.” After finishing the test, they simply continued. As in Studies 1 and 2, in the positive and negative feedback condition participants waited twelve seconds after finishing the test to get feedback on the intelligence test. Participants in the negative feedback condition read: “Sorry! Your performance was *below average!* 82 % of participants who completed this intelligence task in a previous study *performed better* than you.” Participants in the positive feedback condition read: “Congratulations! Your performance was *above-average!* You *performed better* than 82 % of participants who completed this intelligence task in a previous study.”

**Negative affect.** As in Studies 1 and 2, participants were asked to state their current feeling on the Self-Assessment Manikin (SAM; Bradley & Lang, 1994) and the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The ten positive adjectives and the ten negative adjectives were combined to a positive affect score ( $\alpha = .92$ ) and a negative affect score ( $\alpha = .91$ ).

**Expected rumination.** As in Study 2, we asked participants “How much do you expect to keep thinking about your performance?” to measure expected rumination. This item was answered on a 7-point scale (1 = *not much* and 7 = *a lot*). In the end, we assessed the demographic variables age, sex, education, country of birth and mother tongue, and asked for comments on the study. Participants were then given a chance to indicate if they did not believe in the feedback. Finally, we thanked participants for their participation and debriefed them.

## Results

We conducted one-way ANOVAs to test for pre-feedback differences in the three feedback conditions. There were no significant differences in the variance regarding the importance to perform well in the intelligence test,  $F(2, 298) = 0.51, p = .603$  and the self-evaluation following the intelligence test,  $F(2, 298) = 1.88, p = .155$ . Moreover, the three feedback groups did not significantly differ in their variance regarding entity belief,

$F(2, 298) = 0.47, p = .628$ , psychological entitlement,  $F(2, 298) = 1.90, p = .151$ , self-esteem,  $F(2, 298) = 0.87, p = .419$ , vulnerable narcissism,  $F(2, 298) = 0.84, p = .431$ , age  $F(2, 298) = 1.60, p = .203$  as well as gender distribution  $\chi^2(2, 301) = 0.65, p = .723$ . See Table 4 in the Appendix for means and standard deviations.

### Manipulation Check

The manipulation check revealed the expected differences in negative affect after participants had received the feedback manipulation. One-way ANOVAs indicated inter-conditional differences in variance regarding negative affect (SAM),  $F(2, 298) = 80.00, p < .001$  and negative affect (PANAS),  $F(2, 298) = 21.64, p < .001$  revealed differences in variance between our three feedback conditions. As in Study 2, we found no effect of condition for expected rumination  $F(2, 298) = 0.70, p = .495$ . See Table 4 in the Appendix for means and standard deviations.

### The Role of Vulnerable Narcissism

As in Studies 1 and 2, we conducted a moderation analysis using the PROCESS macro for SPSS (Model 2; Hayes, 2013) in which we entered vulnerable narcissism as a continuous independent variable and feedback condition as two dummy coded factor variables (F1 and F2). F1 accounted for the difference between the negative and the positive feedback condition, F2 accounted for the difference between the no feedback and the positive feedback condition. Furthermore, we controlled for the importance to perform well in the intelligence test and the self-evaluation following the intelligence test. All variables were z-standardized for the analyses to receive standardized coefficients (Aiken et al., 1991).

**Negative affect.** With respect to negative affect (SAM), we found the expected interaction effects between vulnerable narcissism and feedback condition F1 (negative vs. positive),  $b = 0.29, t(293) = 2.62, p = .009$  and between vulnerable narcissism and feedback condition F2 (no feedback vs. positive),  $b = 0.30, t(293) = 2.75, p = .006$ . The two interaction terms as a set accounted for 1.89% of the variance in negative affect (SAM),  $F(2, 293) = 4.83,$

$p = .009$ . Simple slopes revealed a significant conditional effect of vulnerable narcissism on negative affect (SAM) in the negative feedback condition  $b = 0.22$ ,  $t(293) = 2.74$ ,  $p = .007$  as well as in the no feedback condition  $b = 0.23$ ,  $t(293) = 2.94$ ,  $p = .004$  but not in the positive feedback condition  $b = -0.07$ ,  $t(293) = 0.90$ ,  $p = .371$ . The results support our hypotheses 1 and 2 (Figure 9).

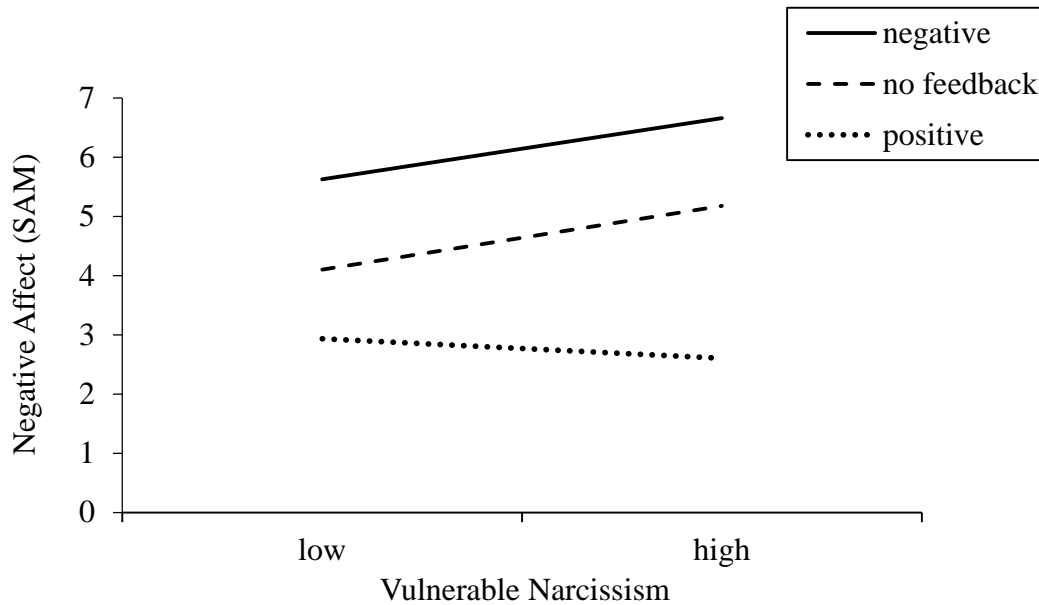


Figure 9. Interaction between vulnerable narcissism and feedback condition in the prediction of negative affect (SAM).

Regarding negative affect (PANAS), we found the expected interaction effects between vulnerable narcissism and feedback condition F1 (negative vs. positive),  $b = 0.37$ ,  $t(293) = 3.21$ ,  $p = .002$  and vulnerable narcissism and feedback condition F2 (no feedback vs. positive),  $b = 0.37$ ,  $t(293) = 3.29$ ,  $p = .001$ . The two interaction terms together accounted for 3% of the variance in negative affect (PANAS),  $F(2, 293) = 7.09$ ,  $p < .001$ . Simple slopes revealed conditional effects of vulnerable narcissism on negative affect (PANAS) in the negative feedback condition,  $b = 0.54$ ,  $t(293) = 6.58$ ,  $p < .001$ , as well as in the no feedback condition,  $b = 0.55$ ,  $t(293) = 6.80$ ,  $p < .001$ . We also found a small conditional effect of vulnerable narcissism on negative affect (PANAS) in the positive feedback condition,  $b = 0.18$ ,  $t(293) = 2.21$ ,  $p = .028$ . However, the conditional effects are significantly higher in

the negative and no feedback conditions compared to the positive feedback condition (Figure 10). These findings support our hypotheses 1 and 2 and our idea stating that only positive feedback compensate for the depressive tendencies in people high in vulnerable narcissism.

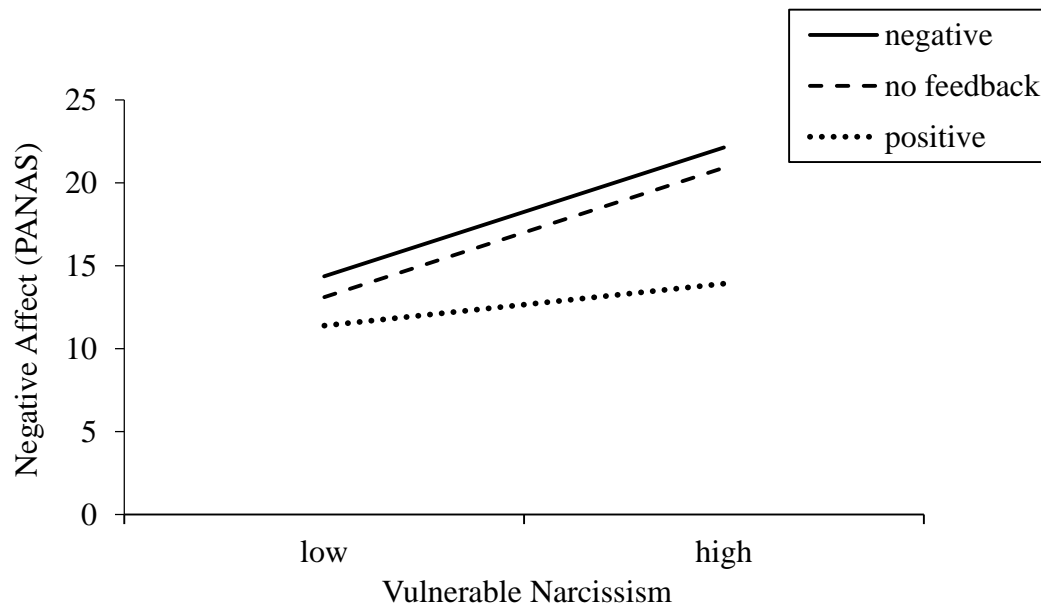


Figure 10. Interaction between vulnerable narcissism and feedback condition in the prediction of negative affect (PANAS).

**Expected rumination.** To test our hypothesis that vulnerable narcissism affects expected rumination only in the negative feedback condition compared to no feedback and positive feedback, we changed the factor coding in our moderation analysis in that F1 accounted for the difference between the negative and the positive feedback condition, and F2 accounted for the difference between the negative and the no feedback condition. We found interaction effects of vulnerable narcissism and feedback condition F1 (negative vs. positive) on expected rumination,  $b = -0.31$ ,  $t(293) = 2.48$ ,  $p = .014$  as well as for vulnerable narcissism and feedback condition F2 (negative vs. no feedback),  $b = -0.29$ ,  $t(293) = 2.30$ ,  $p = .022$ . The two interaction terms together accounted for 1.97% of the variance in expected rumination,  $F(2, 293) = 3.78$ ,  $p = .024$ . Simple slopes revealed a conditional effect of vulnerable narcissism on expected rumination in the negative feedback condition,  $b = 0.44$ ,  $t(293) = 4.81$ ,

$p < .001$ , but neither in the no feedback condition,  $b = 0.15$ ,  $t(293) = 1.70$ ,  $p = .091$  nor the positive feedback condition,  $b = 0.13$ ,  $t(293) = 1.44$ ,  $p = .152$  (Figure 11). Thus, we found support for our third hypothesis and our idea that no feedback leads to equally high rumination in low and high vulnerable narcissistic people.

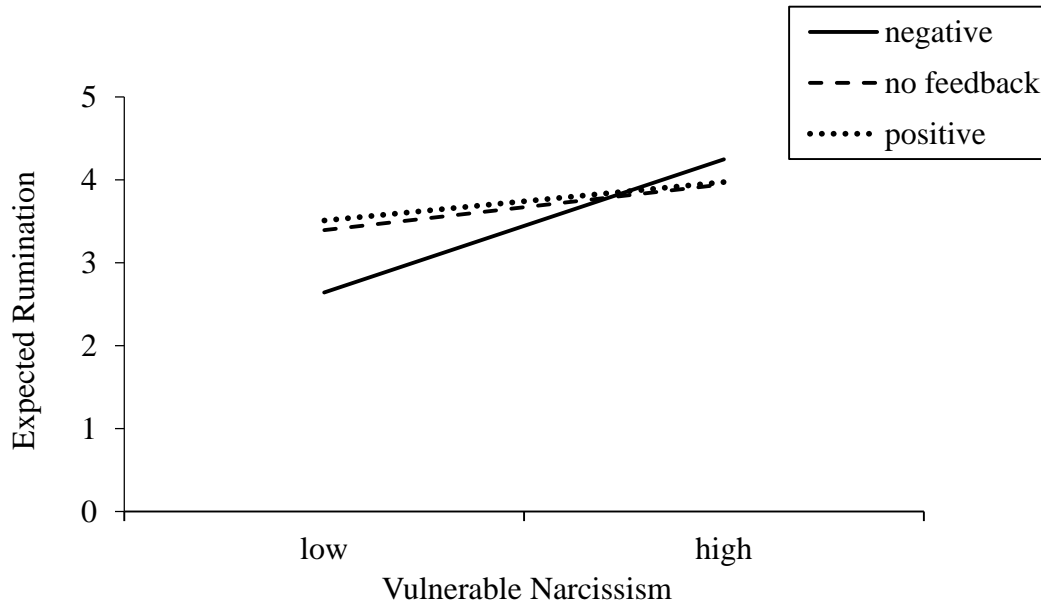


Figure 11. Interaction between vulnerable narcissism and feedback condition in the prediction of expected rumination.

### Explorative Analyses

As in Study 2, vulnerable narcissism was negatively correlated with self-esteem,  $r(301) = -.59$ ,  $p < .001$ , and positively associated with entity belief,  $r(301) = .26$ ,  $p < .001$  as well as psychological entitlement  $r(301) = .34$ ,  $p < .001$ . Moreover, self-esteem and psychological entitlement were correlated with our dependent variables, negative affect and expected rumination (see Table 5 in the Appendix). Therefore, we conducted our moderation analyses again, controlling for self-esteem and psychological entitlement individually.

We found interaction effects of vulnerable narcissism and feedback condition on negative affect (SAM),  $\Delta R^2 = 0.019$ ,  $F(2, 292) = 4.94$ ,  $p = .008$  and negative affect (PANAS),  $\Delta R^2 = 0.030$ ,  $F(2, 292) = 7.39$ ,  $p < .001$  controlling for self-esteem. Furthermore, we found

the interaction effect of vulnerable narcissism and feedback condition on expected rumination,  $\Delta R^2 = 0.020$ ,  $F(2, 292) = 3.76$ ,  $p = .024$ , controlling for self-esteem.

With regard to psychological entitlement, we found interaction effects of vulnerable narcissism and feedback condition on negative affect (SAM),  $\Delta R^2 = 0.019$ ,  $F(2, 292) = 4.82$ ,  $p = .009$  and negative affect (PANAS),  $\Delta R^2 = 0.030$ ,  $F(2, 292) = 7.64$ ,  $p < .001$  controlling for psychological entitlement. Moreover, we found the interaction effect of vulnerable narcissism and feedback condition on expected rumination,  $\Delta R^2 = 0.020$ ,  $F(2, 292) = 3.73$ ,  $p = .025$ , controlling for psychological entitlement. Thus, the interaction between vulnerable narcissism and feedback condition explained negative affect and expected rumination over and above self-esteem and psychological entitlement.

### Discussion

In Study 3, we aimed to replicate our findings from Study 2 and tested the influence of a no feedback condition. All hypotheses were fully supported. Regarding negative affect, we could replicate our findings of Study 2 concerning the difference between positive feedback and negative feedback. Vulnerable narcissism led to higher negative affect after receiving negative feedback but not after receiving positive feedback. Furthermore, we found that no feedback displayed a pattern, which was similar to negative feedback. One explanation for this result might be that no feedback triggers feelings of uncertainty about the performance which is associated with strong negative responses in narcissistic personalities (Martinez et al., 2008). Thus, we found further support for our theoretical framework, which suggests that vulnerable narcissism is associated with a high negative affect when receiving negative feedback.

Regarding the expected rumination following feedback, we found an interaction effect of vulnerable narcissism and feedback condition on expected rumination in that only negative feedback revealed a difference in expected rumination between high and low vulnerable narcissism. As in Study 2, participants scoring low on our measure of vulnerable narcissism



expected to ruminate less when the feedback was negative which could be an indicator of adaptive affect regulation. However, participants scoring high on our measure of vulnerable narcissism expected to ruminate more when the feedback was negative indicating internalizing problems.

### **General Discussion Studies 1 to 3**

In Studies 1 to 3, we tested how vulnerable narcissism is related to negative affect and internalizing problems (e.g., rumination and withdrawal) following feedback (negative, neutral, positive) and no feedback on an intelligence test.

#### **Negative Affect**

We found that negative affect (SAM) was higher in vulnerable narcissistic people after receiving negative feedback compared to neutral (Studies 1 and 2) or positive (Studies 2 and 3) feedback. Interestingly, after receiving no feedback (Study 3) participants scoring high on our measure of vulnerable narcissism showed similar levels of negative affect (SAM) as after receiving negative feedback indicating that uncertainty about the own performance in an intelligence test arises similar feelings in vulnerable narcissistic people as negative feedback does. Regarding negative affect (PANAS), people high on vulnerable narcissism felt more negative after receiving negative, neutral or no feedback compared to positive feedback (Studies 2 and 3). Thus, only positive feedback lead to a regular affective response in participants scoring high on our measure of vulnerable narcissism.

In conclusion, our two different affect measures showed similar results concerning a conditional effect of vulnerable narcissism on negative affect following negative feedback. However, for neutral feedback, we revealed differences between the two measures in that the PANAS measure showed a conditional effect of vulnerable narcissism on negative affect, whereas the SAM measure did not. We explain these different findings with the different representation of vulnerable narcissistic depressive symptoms in the two measures. Former studies assessed negative affect using one scale or one single quality of negative affect (e.g.,

shame). Our three studies emphasize the importance of using different measures to allow for a differentiated view on the relationship between vulnerable narcissism and negative affect. By introducing a second affective measure, we follow Robinson and Clore (2002) who state that the validity of self-report measures of emotion varies by the type. Therefore, using different approaches to measuring affect is crucial to get a more differentiated view on the narcissistic response to normative, negative performance feedback. Furthermore, our findings expand the existing literature by providing a more consistent picture of how vulnerable narcissism interacts with different feedback conditions.

### **Affect Regulation**

In Study 1, we expected that vulnerable narcissism would predict less motivation and lower performance in a subsequent task following negative feedback. We assumed that maladaptive affect regulation in vulnerable narcissistic people would lead to less task persistence. However, we found no interaction effect of vulnerable narcissism and feedback condition (negative vs. neutral) on neither motivation nor performance in a subsequent anagram task. This finding is contradictory to other findings showing that happy individuals perform better than sad individuals on creativity tasks (e.g., Isen, Daubman, 1984; Isen, Daubman, & Nowicki, 1987). As we did not continue using motivation and performance as dependent variables in Studies 2 and 3 with bigger sample sizes and additional feedback conditions (positive and no feedback), we are not able to interpret this result regarding affect regulation in vulnerable narcissistic people following feedback. Further studies are needed to test the influence of feedback on motivation and performance in individuals high in vulnerable narcissism.

Regarding expected rumination (Studies 2 and 3), negative feedback revealed a difference between low and high vulnerable narcissism. While participants scoring high on our measure of vulnerable narcissism expected to ruminate independent of the feedback they were receiving, participants scoring low on our measure of vulnerable narcissism lowered

their expected rumination after negative feedback. This finding indicates adaptive affect regulation in individuals low in vulnerable narcissism and maladaptive affect regulation in individuals high in vulnerable narcissism (Garnefski et al., 2005; Garnefski & Kraaij, 2006).

Other lines of research revealed that task-focused rumination after failure facilitates performance improvement (Ciarocco, Vohs, & Baumeister, 2010). However, we aimed to assess self-focused rumination, which is associated with internalizing and depressive symptoms (e.g., Mor & Winquist, 2002; Spasojevic & Alloy, 2001) and cognitive inflexibility reducing performance improvement (Davis & Nolen-Hoeksema, 2000). We would expect our measure to assess self-focused rumination instead of task-focused rumination, although we cannot exclude that people might have thought of task-relevant rumination while answering our question. Future studies could try to differentiate between constructive and unconstructive repetitive thought (see Watkins, 2008 for a review) by measuring different forms of repetitive thought to increase validity (e.g., Rumination-Reflection Questionnaire, Trapnell & Campbell, 1999).

### **Limitations and Future Research**

Future research could complement our findings with physiological testing measures of affect or facial behavior (see Mauss & Robinson, 2009 for a review of different measures of affect). Moreover, new methods in face recognition could be used to easily code facial expressions regarding affective states (Rukavina, Gruss, Hoffmann, & Traue, 2016). Being able to test affect without attracting attention might also enable better pre-post testing, which allows for more precise regression analyses. In our studies, we decided to resign a pre-testing not to call participants' attention to affect testing.

Furthermore, future studies could extrude behavioral variables to test for behavioral responses to negative feedback in vulnerable narcissistic people. In Study 1, we tried to test the consequences of negative feedback on motivation and performance in a subsequent task (i.e., task persistence). As persistence in goal striving is important for well-being (Smith,

Ntoumanis, Duda, & Vansteenkiste, 2011; Windsor, 2009), the relationship between negative feedback and goal-striving behavior in individuals high in vulnerable narcissism should gain further attention.

In addition to goal striving behavior, it could be interesting to test for social behavior following negative feedback. As Martinez et al. (2008) found aggressive behavior towards a noninvolved person in people high in grandiose narcissism after receiving negative feedback, future research could investigate social behavior following feedback in people high in vulnerable narcissism. Due to their tendency to internalizing problems, we would expect them to withdrawal from social situations following negative feedback instead of showing aggressive behavior towards another person (i.e., externalizing problems).

### **Implications**

Our results from Studies 1 to 3 imply that people high in vulnerable narcissism respond to negative feedback with higher negative affect than people low in vulnerable narcissism. Furthermore, they seem to lack an adaptive coping strategy to deal with their emotions following negative feedback. Research has revealed harmful effects of negative self-focused rumination on the development and maintenance of affective disorders (e.g., Lyubormirsky and Nolen-Hoeksema, 1995; Nolen-Hoeksema, 1998; Spasojevic & Alloy, 2001). Affective disorders reduce well-being and the ability to work (e.g., Kessler et al., 2001). Therefore, the main implication of our results should be to help people high in vulnerable narcissism to develop an adaptive coping strategy to deal with negative feedback.

### **Regulate the Vulnerable Narcissistic Response to Negative Feedback**

In the emotion regulation literature, self-regulatory strategies which focus on reframing and future planning (e.g., positive refocusing, refocus on planning, putting into perspective and positive reappraisal) are seen to be adaptive strategies. Strategies which focus on analyzing the negative event and searching for someone to blame (e.g., self-blame, blaming others, rumination and catastrophizing) are seen to be maladaptive strategies to cope

with negative events (Augustine & Hemenover, 2009; Garnefski, Kraaij, & Spinhoven, 2001; Garnefski & Kraaij, 2006; Gross & John, 2003; Rusting & DeHart, 2000).

Not surprisingly, vulnerable narcissism is negatively associated with the adaptive coping strategies and positively associated with the maladaptive coping strategies (Garnefski et al., 2005; Zhang et al., 2015). In Studies 1 to 3, we showed that people high on vulnerable narcissism respond with higher negative affect and higher expected rumination to negative feedback compared to people low on vulnerable narcissism. The combination of these two outcomes can lead to a vicious circle in that self-focused rumination is associated with negative affect (Lyubormirsky and Nolen-Hoeksema, 1995; Moberly & Watkins, 2008; Mor & Winquist, 2002; Nolen-Hoeksema & Morrow, 2008; Thomsen, 2006). We assume that for people high on vulnerable narcissism, due to their tendency to depressive and internalizing symptoms, it is more difficult to exit this vicious circle than for people low on vulnerable narcissism (Garnefski et al., 2005).

In contrast to unconstructive rumination (i.e., vicious circle, negative self-focused rumination), a constructive reflection of the situation and action control have been suggested to foster adaptive affect regulation (Thomsen, Tønnesvang, Schnieber, & Olsen, 2011; Watkins, 2008; Webb, Schweiger Gallo, Miles, Gollwitzer, & Sheeran, 2012). A constructive reflection is associated with a less negative, more concrete level of thought (Watkins, 2008).

We suggest that the self-regulatory strategy of *mental contrasting with implementation intentions* (MCII; Oettingen & Gollwitzer, 2010; Oettingen, 2012) could foster constructive reflection and action control and thus, help vulnerable narcissistic people to exit the vicious circle of self-focused rumination and reduce negative affect.

### **Mental Contrasting with Implementation Intentions**

Mental contrasting with implementation intentions (MCII) is a self-regulatory strategy which fosters goal pursuit in idiosyncratic wishes. The strategy has been found to be successful in a variety of life domains such as the academic domain (Duckworth, Grant,

Loew, Oettingen, & Gollwitzer, 2010; Duckworth, Kirby, Gollwitzer, & Oettingen, 2013; Gawrilow, Morgenroth, Schultz, Oettingen, & Gollwitzer, 2013; Oettingen, H. B. Kappes, Guttenberg, & Gollwitzer, 2015), the health domain (Adriaanse et al., 2010; Christiansen, Oettingen, Dahme, & Klinger, 2010; Fritzsche, Schlier, Oettingen, & Lincoln, 2016; Stadler, Oettingen, & Gollwitzer, 2009; Stadler, Oettingen, & Gollwitzer, 2010), and interpersonal relationships (Houssais, Oettingen, & Mayer, 2013; Kirk, Oettingen, & Gollwitzer, 2013).

MCII consists of two parts, mental contrasting and implementation intentions.

### **Mental Contrasting**

When people engage in MCII, they first identify a personal wish which is important to them and feasible (e.g., I want to cope with my negative feelings about the feedback). Next, they reflect on the positive future that is they envision their feelings, behaviors or interactions with others as if they had already realized their wish (e.g., I feel good despite the feedback). Rather than get stuck in this positive future, which has been shown to be counterproductive to wish realization (e.g., H. B. Kappes & Oettingen, 2011), in a next step people reflect on their most important inner obstacle that stands in their way of realizing their wish (e.g., negative thoughts about myself). This first part of the strategy is called *mental contrasting*.

Mental contrasting has been shown to strengthen the person's commitment to his or her idiosyncratic wish depending on the person's expectation to reach his or her wish (see Oettingen, 2012 for a review). Fantasy Realization Theory (Oettingen 2000; 2012) describes three additional modes of thinking about the future: *indulging* (solely envisioning the positive future), *dwelling* (solely ruminating on the obstacles), and *reverse contrasting* (thinking about the obstacles first and then envisioning the positive future). Within these four different modes of thought, only mental contrasting has been found to strengthen the person's commitment to his or her wish in line with the person's expectations of success.

**Mechanisms.** Cognitive mechanisms within mental contrasting are responsible for the increased commitment when expectations of success are high. First, mental contrasting leads

to high commitment to the realization of the wish by cognitively connecting the positive future with what stands in the way to reach this positive future (A. Kappes & Oettingen, 2014). Second, in mental contrasting the current reality is perceived as an obstacle that stands in the way to realize the wish (A. Kappes, Wendt, Reinelt, & Oettingen, 2013). Third, mental contrasting strengthens the association between what stands in the way to reach the positive future and concrete actions to overcome the identified obstacles (A. Kappes, Singmann, & Oettingen, 2012).

From a motivational point of view, feelings of energization have been identified to mediate the relationship between expectations and commitment as well as actual performance when people engage in mental contrasting (Oettingen, Mayer, Sevincer, Stephens, & Pak, 2009).

### **Implementation Intentions**

Within the second part of MCII, people build their personal if-then plan to overcome their obstacles that they had identified in mental contrasting. The if-then plan connects the situation which is relevant for the obstacle to occur with the preferred behavior (e.g., *If I find myself ruminating in a feedback situation, then I will search for the positive aspects of this situation*). This so called *implementation intention* has been shown to ease the realization of the wish and increase the likelihood to show the preferred behavior in relevant situations by fostering a strong connectivity between the cue situation and the suitable behavioral response (see Gollwitzer & Sheeran, 2006 for a meta-analysis).

### **Control Conditions**

MCII has been investigated in various ways. First, the self-regulatory strategy has been a successful intervention in fostering the effects of provided information or treatment. For example, in one study, people were more successful in reducing their meat consumption when they were provided with goal-relevant information and engaged in MCII compared to people who were only provided with the goal-relevant information (Loy, Wieber, Gollwitzer,

& Oettingen, 2016). Similarly, in another study, women were more successful in increasing physical activity after being provided with goal-relevant information and engaged in MCII than after being provided with goal-relevant information only (Stadler et al., 2009). In yet another study school, children at risk for ADHD were taught either a learning style to improve their school-related self-regulation alone or the same learning style and MCII. Children in the learning style and MCII condition showed higher school-related self-regulation (i.e. homework completion) than children in the learning style only condition (Gawrilow et al., 2013).

Second, MCII has been tested against using MC (mental contrasting) or II (implementation intentions) alone. For example, in a bargaining task, dyads that were prompted to engage in MCII were more successful in cooperative negotiating than dyads that were prompted to engage in MC or II alone (Kirk et al., 2013). Similarly, individuals who engaged in MCII were more successful in diminishing unhealthy snacking habits than individuals who only engaged in MC or II (Adriaanse et al., 2010). Thus, the two aspects of MCII together show synergetic effects over and above using them as separate strategies, although they were both already found to be effective on their own (see Oettingen, 2012; Gollwitzer & Sheeran, 2006). Moreover, MCII has been tested against a *content control* condition that is participants engaged in the same processes of thought as in MCII, but they fulfilled the intervention in a reverse order. In the content control condition, participants first mentally elaborated the present reality followed by the positive future (i.e., reverse contrasting). Implementation intentions were replaced by an if-then statement in the form of “If (positive future), then (feeling)”. People in the MCII condition were more successful in achieving their goals than people in the content control condition (Houssais et al., 2013; Oettingen et al., 2015). Thus, the positive effects of MCII are driven by the specific order of thoughts determined by this intervention.



Third, MCII has been tested against *waiting control* conditions. In one study, depressive patients showed higher goal achievement when they engaged in MCII about an activity wish (e.g., going for walks) compared to a waiting control group who had only defined an activity wish (Fritzsche et al., 2016). Furthermore, MCII has been tested against *activity control* conditions. For example, Adriaanse et al. (2010) either led participants engage in MCII on a healthy snack goal or led them list healthy snacks. Participants in the MCII condition ate less unhealthy snacks than participants who listed healthy snacks. Thus, the self-regulatory strategy of MCII sets a framework in which goal-relevant information is effectively elaborated and used for goal pursuit.

Finally, MCII has been tested against a *positive thinking* control intervention (Duckworth et al., 2013). Economically disadvantaged schoolchildren improved their grades, attendance and conduct after engaging in MCII versus thinking of the positive future outcomes alone. As for the content control condition implementation intentions were replaced by an if-then statement in the form of “If (positive future), then (feeling)”. This study supports the notion that getting stuck in positive fantasies about the future is counterproductive to behavior change (H. B. Kappes & Oettingen, 2011).

In summary, MCII is a self-regulatory strategy that fosters the realization of personal wishes by connecting the positive future with what stands in the way to reach this positive future and supporting goal attainment by concrete implementation intentions. As a content free strategy MCII could be easily used as a self-regulatory strategy to regulate affect (i.e., MCII on a personal wish to cope with a negative event). Furthermore, in contrast to normative strategies, MCII lets the person decide what plan is suitable for him or her in this specific situation which could be especially relevant for narcissistic people who show difficulties accepting advice (Kausel, Culbertson, Leiva, Slaughter, & Jackson, 2015). Therefore, MCII seems promising to regulate negative feedback in vulnerable narcissistic people.

Moreover, MCII has been tested against various control conditions. It has been shown to improve behavior change and goal attainment in contrast to conditions where participants simply got advised to change their behavior or indulged in the positive future and even in contrast to a content control condition. However, it has not been tested yet against a *dwelling* condition where participants focus on the current reality. In Studies 1 to 3, we found that vulnerable narcissistic people tend to get stuck in rumination about their negative performance (i.e., current reality). Therefore, in Study 4 we tested MCII against a dwelling condition which presumably resembles the natural response behavior in people high on vulnerable narcissism (see Fantasy Realization Theory, Oettingen 2000; 2012).

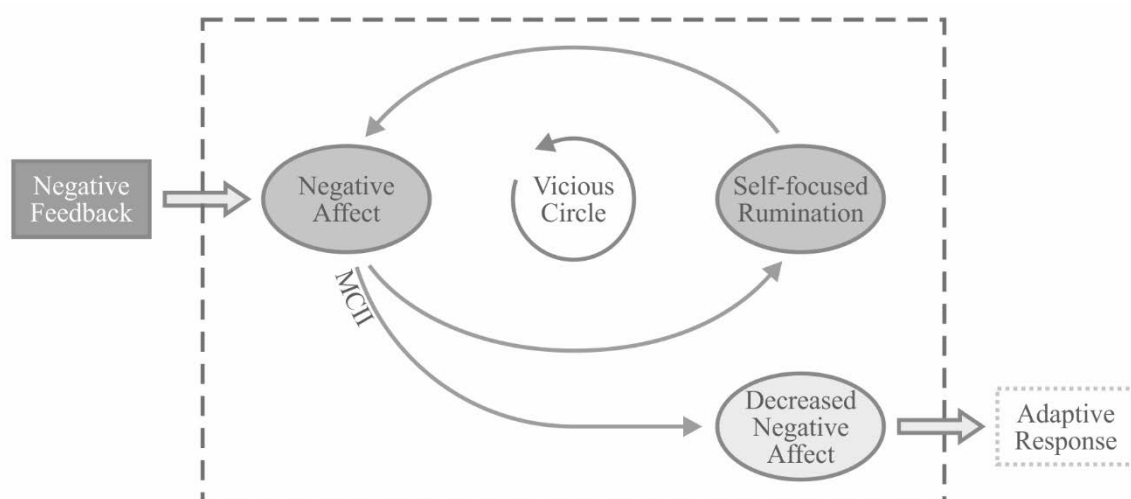
### **Mental Contrasting with Implementation Intentions to Regulate Negative Feedback in Vulnerable Narcissistic People**

Constructive reflections of the current reality and action control have been suggested to foster adaptive affect regulation (Thomsen et al., 2011; Watkins, 2008; Webb et al., 2012). We assume that MCII could help people high on vulnerable narcissism to cope with the negative feedback in two ways, on a global level and on a specific level.

According to the literature on MCII (Oettingen & Gollwitzer, 2010), when people engage in MCII on a personal wish to cope successfully with the negative feedback we would expect strong commitment to the wish and a focus on the realization of the wish. On a global level, this commitment to the wish could help them to resist influences that are counterproductive to the realization of the wish (e.g., negative self-focus). In line with this assumption, A. Kappes, Oettingen and Pak (2012) found that mental contrasting as opposed to indulging or dwelling helped protecting a person's self-view of social competence against negative feedback when the person had mentally contrasted on the wish to solve an interpersonal problem. Furthermore, the if-then plan should support people to stay on track whenever they identify a cue situation which is counterproductive to them realizing their

wish. Thus, on a global level MCII could help people high on vulnerable narcissism to attain a better coping with negative feedback in the current situation and in future situations.

On a specific level, engaging in MCII should change people's way of thinking in this particular situation. By mentally contrasting on their wish to cope successfully with the negative feedback, vulnerable narcissistic people should perceive the current reality (e.g., negative self-focus) as an obstacle that is surmountable (A. Kappes et al., 2013). Thus, in contrast to rumination where people only dwell on the current reality, MCII could change people's perception from a global negative view to a specific less negative view on the current reality. This specific less negative view is suggested to display a constructive way of thinking (Watkins, 2008). This shift from rumination to a constructive less negative way of thinking should be associated with lower negative affect (Garnefski et al., 2001, Watkins, 2008). Moreover, implementation intentions should strengthen action control that has been found to reduce negative emotions (for a review see Webb et al., 2012).



*Figure 12.* The assumed influence of MCII on the vicious circle of negative affect and self-focused rumination.

In sum, on a global level MCII should facilitate successful coping with negative feedback in future feedback situations. And on a specific level, contrary to rumination, MCII should help people high on vulnerable narcissism (i.e., prone to rumination) to exit the vicious

circle of rumination and negative affect after receiving negative feedback in the specific situation (Figure 12).

### **Adaptive Behavioral Response**

On a behavioral level, implementation intentions reduced the impact of negative affect on outcome behavior (Kirk, Gollwitzer, & Carnevale, 2011; Webb, Sheeran, et al., 2012). In one study, participants who formed implementation intentions about staying calm when receiving an unfair offer in an economic game (ultimatum game), managed to regulate their negative affect and take more unfair offers (in this case the wiser decision) than participants who simply formed goal intentions (Kirk et al., 2011). Thus, implementation intentions helped to withhold impulsive behavior and stay on track. On a more distal level, MCII has also been found to influence impulsive behavior in ADHD children (Gawrilow et al., 2013).

Regarding negative feedback, MCII could therefore facilitate individuals to stay persistent on a task they received negative feedback on, instead of withdrawing from the task. Especially, people high on vulnerable narcissism who avoid negative feedback (Di Paula & Campbell, 2002; Sommer & Baumeister, 2002) could benefit from MCII in this way, in addition to decreased negative affect.

In conclusion, we expect people high on vulnerable narcissism to profit from MCII as a self-regulatory strategy in that they would reduce their negative affect and stay more persistent on tasks they received negative feedback on.

### **Study 4**

In Study 4, we aimed to test our assumptions that MCII reduces negative affect and helps to withhold impulsive behavior. Therefore, we conducted a between-subjects experimental laboratory study with a high vulnerable narcissistic sample (one standard deviation above the mean). Moreover, to account for an experimenter effect (female experimenter); we only invited female participants to take part in our study. Following

Studies 1 to 3, we provided all participants with the same bogus negative feedback on their performance in an intelligence test.

After receiving the feedback, participants were randomized to one of the two experimental conditions. One half engaged in *MCII* whereas the other half engaged in a *dwelling* condition. Participants in the MCII condition mentally contrasted on an idiosyncratic wish to successfully cope with the negative feedback and formed an implementation intention about their coping behavior. Participants in the dwelling condition dwelled on an idiosyncratic wish to successfully cope with the negative feedback (i.e., named and elaborated what stood in the way of realizing their wish) and formed an if-then statement in the form of “If (obstacle), then (feeling)”.

As dependent variables we measured negative affect and task persistence which we operationalized by giving participants the opportunity to repeat the test. Vulnerable narcissism is associated with withdrawal, and low persistence, especially after failure and rejection (Di Paula & Campbell, 2002; Sommer & Baumeister, 2002). Therefore, refusing to repeat the test (no task persistence) would be the expected impulsive behavioral response to negative feedback in our vulnerable narcissistic sample.

The higher focus on the realization of the coping wish and the constructive way of thinking about the negative reality in MCII should help participants to exit the vicious circle of negative affect and self-focused rumination. However, dwelling on the coping wish should support participants to stay in the vicious circle of negative affect and self-focused rumination (Figure 13).

Therefore, we expected participants in the MCII condition to show lower negative affect than participants in the dwelling condition (hypothesis 1). Furthermore, as shame has been suggested to be a key feeling in vulnerable narcissistic people after receiving negative feedback (Freis et al., 2015; Malkin et al., 2011), participants in the MCII condition should score lower on shame (item 14 of the PANAS) than participants in the dwelling condition

(hypothesis 2). Moreover, higher action control should withhold participants from impulsive behavior in the negative feedback situation (Kirk et al., 2011; Webb et al., 2012). Therefore, we expected participants in the MCII condition to be more prone to rerun the intelligence test (task persistence) than participants in the dwelling condition (hypothesis 3).

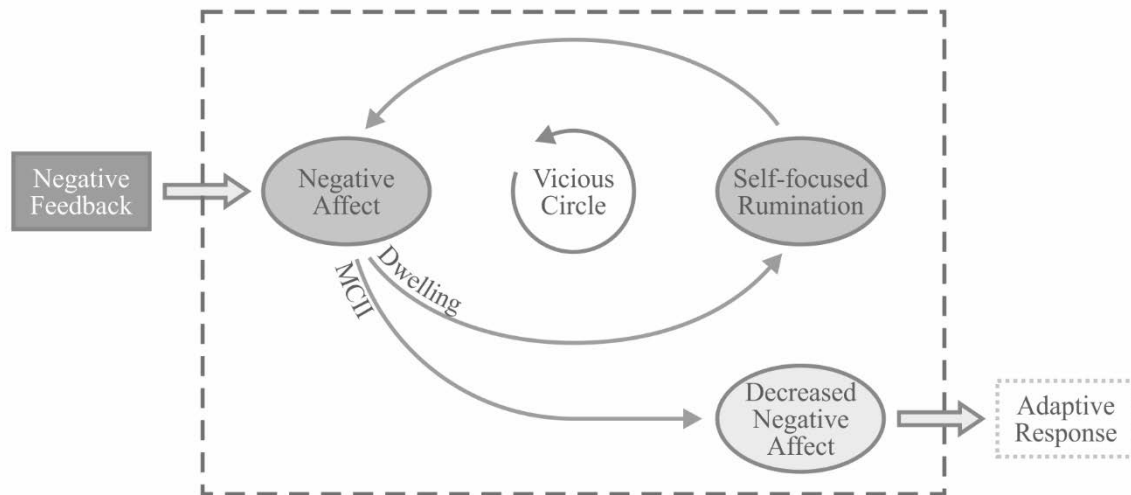


Figure 13. The assumed influence of MCII on the vicious circle of negative affect and self-focused rumination.

## Method

### Participants

Participants were recruited via the social network Facebook, the student job platform *Stellenwerk* as well as via the study participant platform *SONA*. A total of 442 persons participated in the online pre-screening. The inclusion criteria for the laboratory study were female sex/gender as we wanted to avoid any experimenter effects, and scoring one standard deviation above the mean on the Maladaptive Covert Narcissism Scale (Cheek et al., 2013). Therefore, the pre-screening entailed the assessment of vulnerable narcissism, demographic questions regarding sex, and the contact details to invite participants to the laboratory session. In addition we assessed self-esteem as people high on vulnerable narcissism should score low on self-esteem (see Studies 2 and 3). In total, 278 participants provided us with their contact

details. According to the inclusion criteria, of these 278 participants 40 participants were invited to take part in the laboratory study.

The resulting sample consisted of 40 female participants, who completed the study in the laboratory in return for payment. Participants' mean age was  $M = 24.95$  years ( $SD = 5.72$ ,  $min = 18$ ,  $max = 48$ ). The sample mostly consisted of students (70%), 25% of the participants were psychology students, 20% were currently employed and 10% were seeking work. Most participants indicated German as their mother tongue (87.5%). Our screening led to a highly vulnerable narcissistic sample ( $M = 106.43$ ,  $SD = 10.89$ ) compared to the original sample of 442 people ( $M = 78.71$ ,  $SD = 16.53$ ). Moreover, consistent with the negative relationship between vulnerable narcissism and self-esteem (Studies 2 and 3), the highly vulnerable narcissistic sample scored low on self-esteem ( $M = 26.45$ ,  $SD = 4.42$ ) compared to a representative German sample ( $n = 782$ ;  $M = 31.73$ ,  $SD = 4.71$ ; Schmitt & Allik, 2005).

### Materials and Procedure

**Vulnerable narcissism.** To measure vulnerable narcissism, we used the Maladaptive Covert Narcissism Scale (Cheek et al., 2013) as in Studies 1 to 3. However, we had to translate the scale into German (see Appendix for the items). We applied the back-translation approach (Marsden, & Wright, 2010) and changed the 5-point scale into a 7-point scale response format (1 = *strongly disagree* and 7 = *strongly agree*). The internal consistency reliability for the translated scale was Cronbach's  $\alpha = .88$ .

**Self-esteem.** Self-esteem was assessed using the German version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965; von Collani & Herzberg, 2003). This scale contains of ten items ( $\alpha = .76$ ) with items answered on a 4-point scale (1 = *strongly disagree* and 4 = *strongly agree*). Sample items include "I feel mostly self-content" or "Sometimes I feel useless".

**Intelligence test.** Participants were informed that intelligence is a predictor of job success. Therefore, they were picked to complete an intelligence test and were going to be

provided with job-relevant feedback regarding the test. After consenting to take part in the study, participants were provided with detailed information concerning the following intelligence test and were informed that verbal and arithmetic skills were particularly important for future job success. To control for participants' perceived importance to do well on the test, we asked participants "How important is it to you to perform well in the following intelligence test?" They answered on a 7-point scale (1 = *not at all important* and 7 = *very important*). Afterwards participants completed two verbal and two arithmetic parts from the I-S-T 2000R (Liepmann et al., 2007) within a predefined period of time (33 minutes).

After finishing the intelligence test, we asked participants about their self-evaluation of their performance "How well do you think you performed in the intelligence test?" and the perceived likelihood to get negative feedback "How likely do you think it is that you will get a negative performance feedback?" as well as their expected disappointment "How disappointed would you be if the performance feedback was going to be negative?" As in Studies 1 to 3 self-evaluation and commitment to the test could influence participants' affective response to the feedback. To avoid that participants prepare themselves for negative feedback we also asked for the perceived likelihood to get positive feedback "How likely do you think it is that you will get a positive performance feedback?" However, this item was not involved in further calculations. Participants answered the questions on a 7-point scale (1 = *not at all* and 7 = *very*).

**Feedback manipulation.** During the test evaluation by the instructor, participants read an article from a German magazine titled "Je schlauer desto Chef" (SPIEGEL JOB 1/2013, see Appendix) to control for any thinking processes during the waiting time. After 5 to 7 minutes the instructor reentered the room and provided the participant with a standardized negative normative performance feedback: "I am sorry, your performance in the intelligence test was below the average of your age group." The instructor filled in a feedback form and asked the participant to fill in another questionnaire. This questionnaire established



the two experimental conditions. Participants were randomized either to the MCII condition ( $n = 20$ ), or the dwelling condition ( $n = 20$ ).

**MCII condition.** Participants were asked to report an idiosyncratic wish concerning their coping with the provided negative feedback that is important to them and feasible (e.g., I won't take the result too personal). To check for importance and feasibility of the named wish participants were asked "How important is it to you that you will realize your wish?" and "How likely do you think it is that you will realize your wish?" on a 7-point scale (1 = *not at all* and 7 = *very*). Participants in the MCII condition then stated the best thing about realizing their wish (e.g., I would be at ease with myself). Then they elaborated this positive future (e.g., It would be ok for me to be below average in this test. I wouldn't be annoyed or sad. I would concentrate on things I am good at and develop my skills...). Afterward, they moved on naming an obstacle that stood in the way (e.g., my low self-esteem). Then they elaborated this obstacle (e.g., I feel inferior to other people. It is hard to accept being below average...). Finally, participants were asked to formulate a plan in the format of *if* (obstacle), *then I will* (behavior to overcome obstacle) (e.g., If I find myself worrying about my self-esteem, then I will talk to people who like me).

**Dwelling condition.** In the dwelling condition participants only reflected on the obstacles in the current reality. Thus, after identifying their wish and answering the two questions regarding the importance and feasibility of the wish, participants stated their main obstacle that stood in the way of realizing their wish (e.g., my low self-esteem) and elaborated on it (e.g., I never found myself to be intelligent. Bad experiences verify that I do not deserve academic success...). Afterward, they stated a second obstacle (e.g., my pessimism) and elaborated on it (e.g., When I am taking a test, I always have a bad feeling regarding the result. It is the first thing that comes to my mind...). Finally, participants in the dwelling condition were asked to formulate a bogus plan using the most important obstacle as a cue

situation, and how they feel in this situation (e.g., If I find myself worrying about my self-esteem, then I feel ashamed).

**Negative affect.** As in Studies 1 to 3, participants were asked to state their current feeling on the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). In Study 4, we used the German version of the scale by Breyer and Bluemke (2016). The ten positive adjectives and the ten negative adjectives were combined to a positive affect score ( $\alpha = .86$ ) and a negative affect score ( $\alpha = .86$ ). As we were only interested in the negative affect, the positive affect items served as distractor items.

**Task persistence.** We operationalized task persistence by asking participants if they would like to retake the test to improve their results “Would you like to rerun the intelligence test and get the chance to improve your results?” This question was in a simple dichotomous *yes* or *no* format in which *yes* would indicate task persistence and *no* would indicate no task persistence.

In the end, participants were carefully debriefed and thanked for their participation. They were informed about the false feedback and the research goal of the study. All participants were provided with a handout about MCII. This study was approved by an ethical review committee.

## Results

We conducted t-tests to test for pre-conditional differences in the two groups. There were no differences in the means between the two groups regarding self-esteem,  $t(38) = 0.57$ ,  $p = .574$  and vulnerable narcissism,  $t(38) = 0.45$ ,  $p = .659$ . Moreover, the two groups did not differ in their means regarding the perceived importance to perform well in the intelligence test,  $t(38) = 1.00$ ,  $p = .324$  and the self-evaluation following the intelligence test,  $t(38) = 0.14$ ,  $p = .887$ . Furthermore, we found no differences regarding the perceived likelihood of negative feedback  $t(38) = 0.12$ ,  $p = .905$  or the expected disappointment following negative feedback

$t(38) = 0.91, p = .369$ . Thus, our randomization was successful. See Table 6 in the Appendix for means and standard deviations.

As imposed by our cover story, the perceived importance of the intelligence test was on average high ( $M = 5.30, SD = 1.27$ ). The self-evaluation following the intelligence test was on average low ( $M = 3.13, SD = 1.10$ ) and the perceived likelihood of receiving negative feedback was rather high ( $M = 4.63, SD = 1.29$ ) which is consistent with the narcissistic proneness to self-handicapping (Rhodewalt, Tragakis, & Finnerty, 2006).

### **Self-Regulatory Intervention**

As expected, we found no difference in the means between the two experimental groups regarding the indicated importance of their idiosyncratic wishes to cope with the negative feedback participants received  $t(38) = 1.03, p = .310$ . The importance to realize their wish was on average high ( $M = 5.65, SD = 1.23$ ), which emphasized the hypothesized need in people high on vulnerable narcissism to exit the vicious circle and better cope with the negative feedback. Furthermore, we found no difference in the means regarding the expectation to realize the wish  $t(38) = 1.07, p = .293$ . On average, the expectation to realize the wish was above the mid-point of the scale ( $M = 4.73, SD = 1.63$ ). Thus, any difference between the two groups regarding our dependent variables was unlikely to be dependent on the wishes participants have picked. See Table 6 in the Appendix for means and standard deviations.

**Negative affect.** As hypothesized, we found a difference between the two experimental conditions regarding negative affect  $t(38) = 2.26, p = .030, d = 0.72$ . Participants in the MCII condition scored lower on negative affect ( $M = 23.05, SD = 6.12$ ) than participants in the dwelling condition ( $M = 27.00, SD = 4.86$ , Figure 14). Therefore, our first hypothesis was supported.

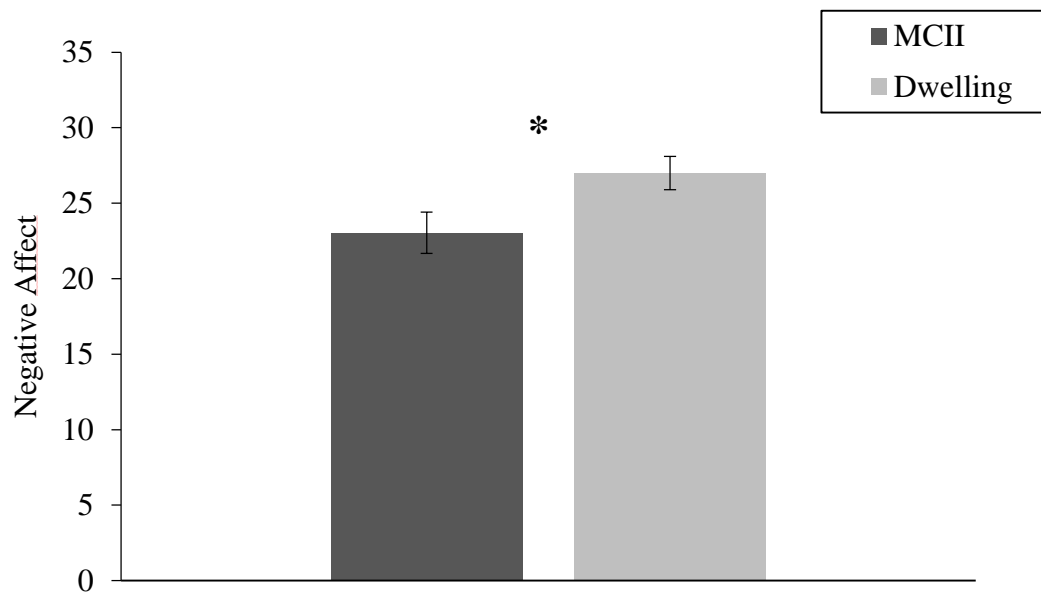
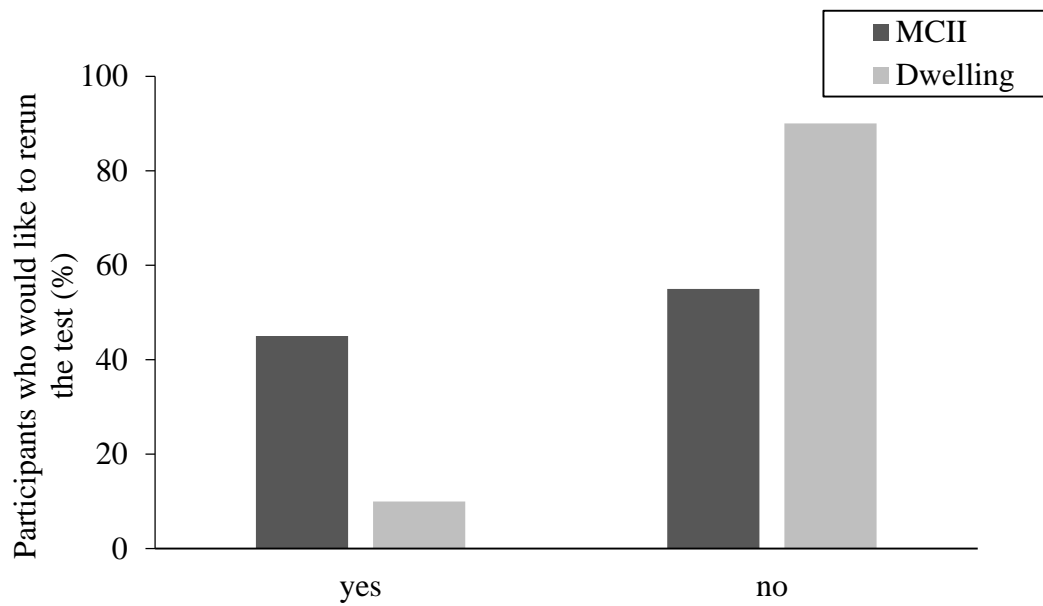


Figure 14. Difference in mean internalized negative affect between the two experimental conditions, MCII and dwelling.

**Shame.** Shame has been suggested to be a key feeling in vulnerable narcissistic people after receiving negative feedback (Freis et al., 2015; Malkin et al., 2011). To discover the influence of the two experimental conditions on shame, we tested the shame item from the PANAS schedule (item 14) individually. The two conditions differed on their shame score,  $t(38) = 2.20, p = .034, d = 0.70$ , in that participants in the MCII condition felt less ashamed ( $M = 2.85, SD = 1.42$ ) than participants in the dwelling condition ( $M = 3.70, SD = .98$ ).

**Task persistence.** We tested the difference between the two experimental conditions in their persistence regarding test repetition using a  $\chi^2$ -test. We found a relation between our experimental conditions and persistence  $\chi^2(1, N = 40) = 6.14, p = .013, r = .39$ . Participants who engaged in MCII were more task persistent than participants who engaged in the dwelling condition (Figure 15). Therefore, our second hypothesis was supported.



*Figure 15.* Distribution of agreement and disagreement between the two experimental conditions, MCII and dwelling.

### Discussion

In Study 4, we tested the influence of the self-regulatory strategy MCII (vs. dwelling) on negative affect and task persistence following negative feedback in a highly vulnerable narcissistic sample. We expected MCII to help people high on vulnerable narcissism to exit the vicious circle of self-focused rumination and negative affect by inducing strong goal commitment regarding their wish to cope with the negative feedback and a constructive way of thinking about the current reality. Furthermore, action control should help people high on vulnerable narcissism to stay task persistent.

### Negative Affect

Results suggest that MCII in contrast to the control condition (dwelling) lowers negative affect (especially shame) after receiving negative feedback on an intelligence test. Participants in the MCII condition seemed to be better able to regulate their negative affect compared to participants in the dwelling condition. This finding supports former work on mental contrasting and implementation intentions as individual strategies, fostering adaptive affect regulation in the face of negative feedback (A. Kappes et al., 2012, Webb et. al., 2012).

Moreover, our findings suggest MCII as an effective response-focused regulation strategy (see Gross, 2001). Response-focused regulation enables people to regulate affect in the relevant situation (specific level). However, on a global level, we assume that MCII can also be used as an antecedent-focused regulation strategy. Antecedent-focused regulation prepares people to cope before an expected emotion eliciting event occurs (see Gross, 2001 for the difference between response- and antecedent-focused regulation). This flexibility is one advantage of MCII in contrast to other regulation strategies (for a review on different emotion regulation strategies, see Augustine & Hemenover, 2009). As our study focused on response-focused regulation, future work could emphasize on antecedent-focused regulation.

Another advantage of MCII compared to other interventions is that it is content-free. In Study 4, participants in the MCII condition came up with various behaviors to cope with their feelings. As coping behaviors participants wrote for example, “thinking of something positive” (i.e., distraction) or “focusing on past success and personal strengths” (i.e., positive refocusing) or “engaging in pleasant activities” (e.g., Yoga). MCII only served as a framework to come up with these behaviors and strive on them.

### **Task Persistence**

Participants in the MCII condition more often agreed to retake the intelligence test than participants in the control condition. Thus, MCII seems to foster task persistence and avoid withdrawal behavior. In Study 1, we found evidence for a generally lower motivation for a subsequent task in people high on vulnerable narcissism. In addition, low self-esteem is associated with lower task persistence after failure (Di Paula & Campbell, 2002; Sommer & Baumeister, 2002). Therefore, MCII seems to reduce the impulsive response to the negative feedback (Kirk, Gollwitzer, & Carnevale, 2011; Webb, Sheeran, et al., 2012). We explain this finding with higher action control within the MCII condition. The relationship between MCII and task persistence could be investigated by a mediation analysis testing perceived action control as a mediator.

Moreover, as participants did not engage in MCII on a wish to perform well in the intelligence test but on a wish to cope constructively with the negative feedback it would be interesting to investigate the role of the goal to perform well in the intelligence test on task persistence after receiving the negative feedback. At this point, we assume that the goal to perform well in the intelligence test was implicitly entailed in the goal to cope constructively with the negative feedback as participants reported on average high importance to perform well in the intelligence test. However, future work could investigate the importance and expectancy to perform well in the intelligence test as moderator variables in the relation between MCII and task persistence.

### **Limitations and Future Research**

First, to test the suggested mediation and moderation analyses on the relation between MCII and task persistence we needed a bigger sample size (Tabachnick & Fidell, 2007). Thus, to test the mechanisms in the MCII-task persistence relationship, future studies could test a regular sample (no inclusion criteria) and manipulate the importance of to perform well in the intelligence test. Furthermore, self-esteem could be manipulated in a bigger sample to support our finding that MCII reduces impulsive behavior after receiving negative feedback.

Second, this study only compared MCII and dwelling with dwelling suggesting maintaining self-focus rumination and negative affect. To be able to better describe the effects of MCII on affect regulation, we needed to test MCII against a *no treatment control* condition which accounts for natural coping behavior. As sad mood (induced by negative feedback) has been suggested to ready people to self-initiate mental contrasting (H. B. Kappes, Oettingen, Mayer, & Maglio, 2011), future studies could test whether MCII is effective over and above the proposed effects of sad mood by adding the no treatment control condition. However, we would expect vulnerable narcissism to be correlated with self-initiated dwelling instead of self-initiated mental contrasting in a no treatment control condition since vulnerable

narcissism is associated with worrying instead of positive future orientation (Miller et al., 2011; Rose, 2002).

Third, one could argue that dwelling might have increased negative affect instead of MCII decreasing it. This argumentation is again only disproved by adding a no treatment control condition. However, the high rumination on the performance feedback (i.e., negative reality) in people high on vulnerable narcissism (Studies 2 and 3) suggests that dwelling on the negative reality is close to their natural coping behavior. Therefore, MCII (not dwelling) is suggested to display a new quality of thinking in people high on vulnerable narcissism which would be responsible for changes in negative affect.

### **Implications**

MCII displays a flexible self-regulatory strategy which has been proven to be effective across a variety of different goals in different life domains. Study 4 shows that MCII also helps vulnerable narcissistic women to exit the vicious circle of self-focus rumination and negative affect and fosters their task persistence in negative feedback situations. The findings suggest the effectiveness of MCII in emotion regulation and reducing impulsive behavior (i.e., withdrawal) following negative feedback. The supposed effects could not only help vulnerable narcissistic people but all people suffering from internalizing symptoms to effectively regulate negative emotions and pursue their personal goals when facing negative feedback.

### **Conclusion**

Whereas research on grandiose narcissism consistently found externalized aggression and other-derogation to be characteristic of the grandiose narcissistic response to negative feedback, former research on the vulnerable narcissistic response to negative feedback is inconsistent. Due to their tendency to internalizing symptoms, vulnerable narcissistic people were expected to show internalized negative affect such as shame and anxiety as well as self-focus rumination following negative feedback. However, some findings suggested a main



effect of vulnerable narcissism on negative affect regardless of the feedback's valence, while other findings suggested the strongest association between vulnerable narcissism and negative affect following positive feedback (compared to negative and neutral feedback), and still other findings suggested a relationship between vulnerable narcissism and negative affect would only exist for personal rejection not for negative performance feedback (i.e., job achievement).

Our findings from Studies 1 to 3 draw a consistent picture of the vulnerable narcissistic response to negative performance feedback (compared to positive, neutral and no feedback) regarding negative affect with the strongest relationship between vulnerable narcissism and negative affect following negative feedback across all three studies. Positive feedback however revealed no relationship between vulnerable narcissism and negative affect.

Furthermore, findings from Study 4 suggest the self-regulatory strategy of mental contrasting with implementation intentions (MCII) to be helpful in reducing negative affect following negative feedback in vulnerable narcissistic women. Therefore, our work not only sets a focus on the problems of vulnerable narcissistic people in feedback situations but also emphasizes on helpful interventions.

Future studies should test the effects of MCII on affect regulation in different samples (e.g., people prone to internalizing symptoms) and different feedback situations (e.g., social rejection). Furthermore, future work could focus on the assumed positive effects on goal attainment (i.e., positive outcomes of the reduction of impulsive behavior).

In summary, people high on vulnerable narcissism have problems to regulate their negative affect and self-focus rumination facing negative feedback. MCII displays a flexible self-regulatory strategy to help people high on vulnerable narcissism to regulate their negative affect and refocus on goal attainment.

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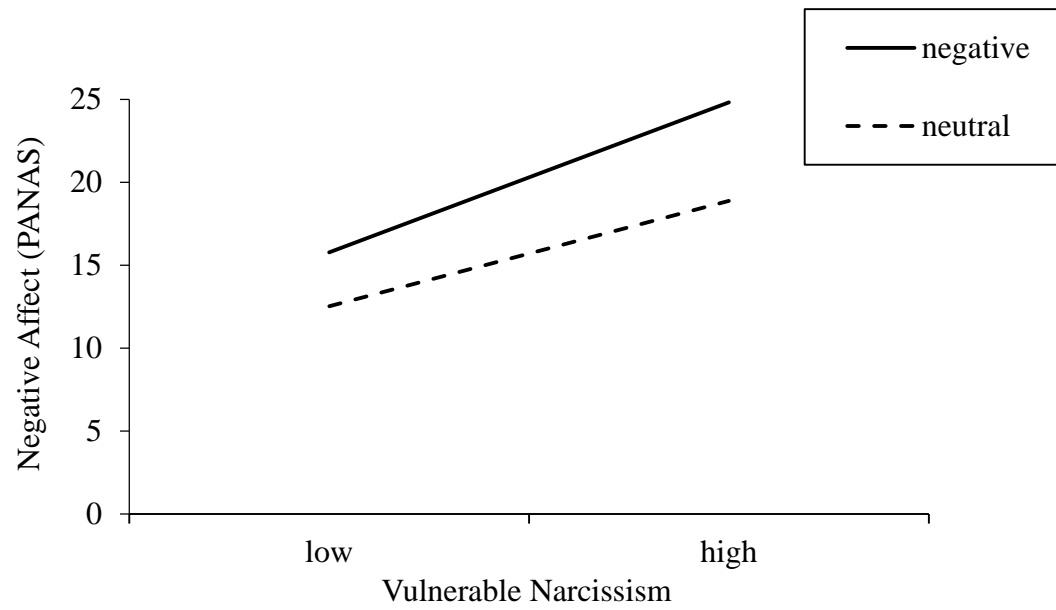
**Appendix Study 1**

Table 1

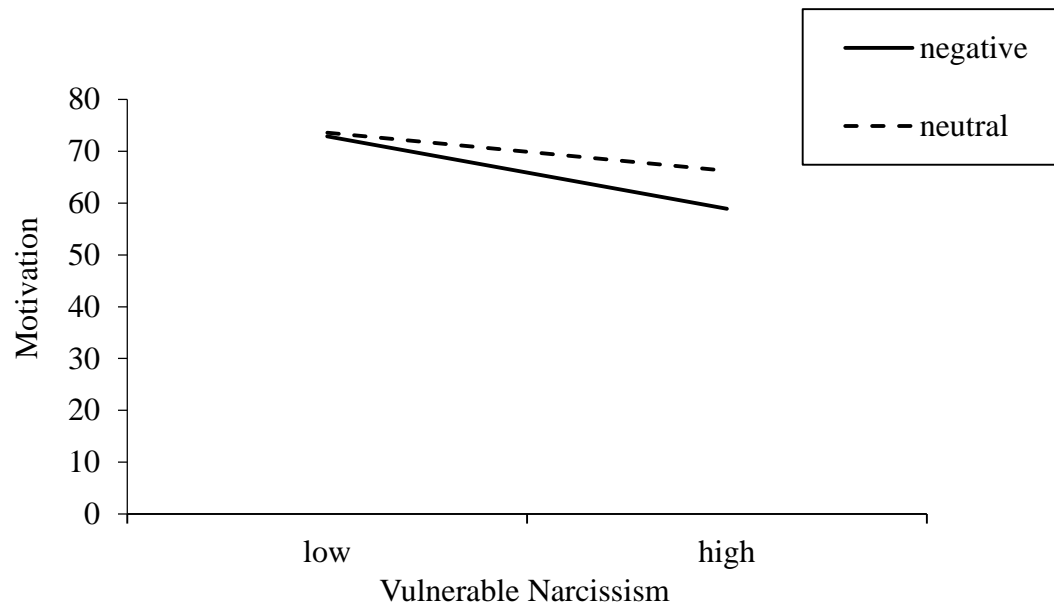
*Study 1: Means and Standard Deviations*

	neutral feedback	negative feedback
	<i>M (SD)</i>	<i>M (SD)</i>
Age	34.90 (11.52)	35.88 (13.65)
Vulnerable narcissism	66.02 (16.98)	61.90 (19.06)
Importance to perform well*	81.90 (17.66)	78.84 (25.40)
Self-evaluation*	49.54 (21.60)	46.96 (21.99)
Negative affect (SAM)	4.48 (1.74)	6.38 (2.29)
Negative affect (PANAS)	16.12 (7.15)	19.72 (8.66)
Motivation	70.08 (25.21)	66.08 (30.97)
Performance	23.50 (14.00)	23.42 (13.67)

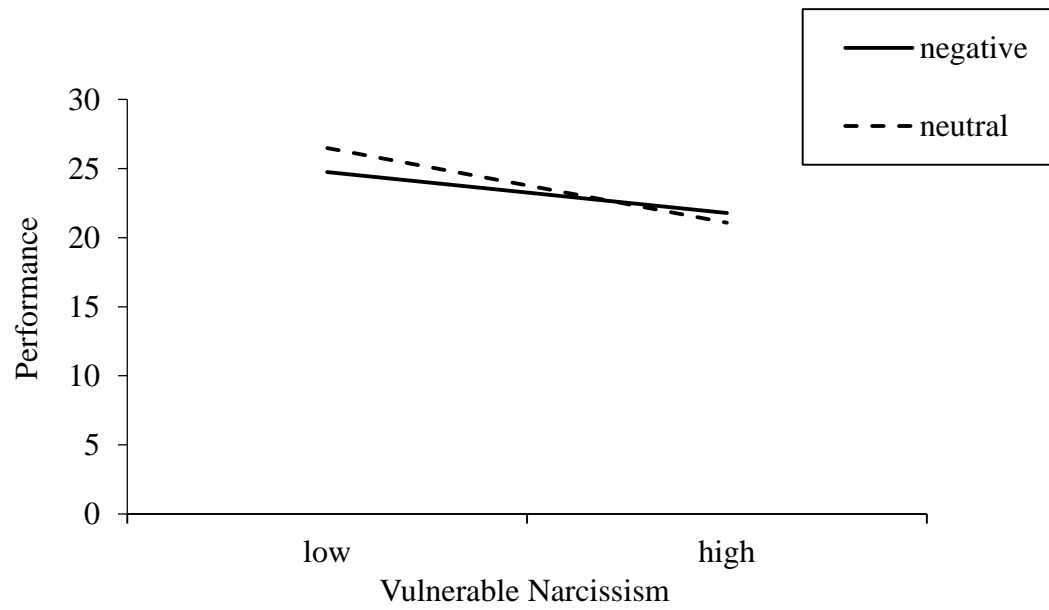
\*In Study 1 this variable ranged from 1 to 100.



*Figure 3.* Study 1: Main effects of vulnerable narcissism and feedback condition on negative affect (PANAS).



*Figure 4.* Study 1: Main effect of vulnerable narcissism on the motivation for a subsequent task.



*Figure 5.* Study 1: No effect of vulnerable narcissism or feedback condition on the performance in a subsequent task.

**Appendix Study 2**

Table 2

*Study 2: Means and Standard Deviations*

	neutral feedback	negative feedback	positive feedback
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	38.39 (12.57)	39.23 (12.78)	40.19 (15.08)
Vulnerable narcissism	62.39 (15.85)	62.22 (17.97)	57.34 (15.99)
Self-esteem	29.56 (5.92)	30.15 (6.37)	31.23 (6.07)
Psychological entitlement	31.74 (12.44)	31.67 (12.61)	29.85 (10.01)
Entity belief	9.18 (4.24)	9.15 (4.19)	9.65 (4.12)
Importance to perform well*	5.37 (1.50)	5.20 (1.60)	5.40 (1.42)
Self-evaluation*	3.06 (1.41)	2.89 (1.12)	2.90 (0.96)
Negative affect (SAM)	4.08 (1.50)	5.89 (2.26)	2.80 (1.54)
Negative affect (PANAS)	15.55 (7.65)	18.30 (7.97)	13.23 (4.97)
Expected rumination	3.65 (1.88)	3.32 (1.89)	3.54 (1.62)

\*In Study 2 this variable ranged from 1 to 7.

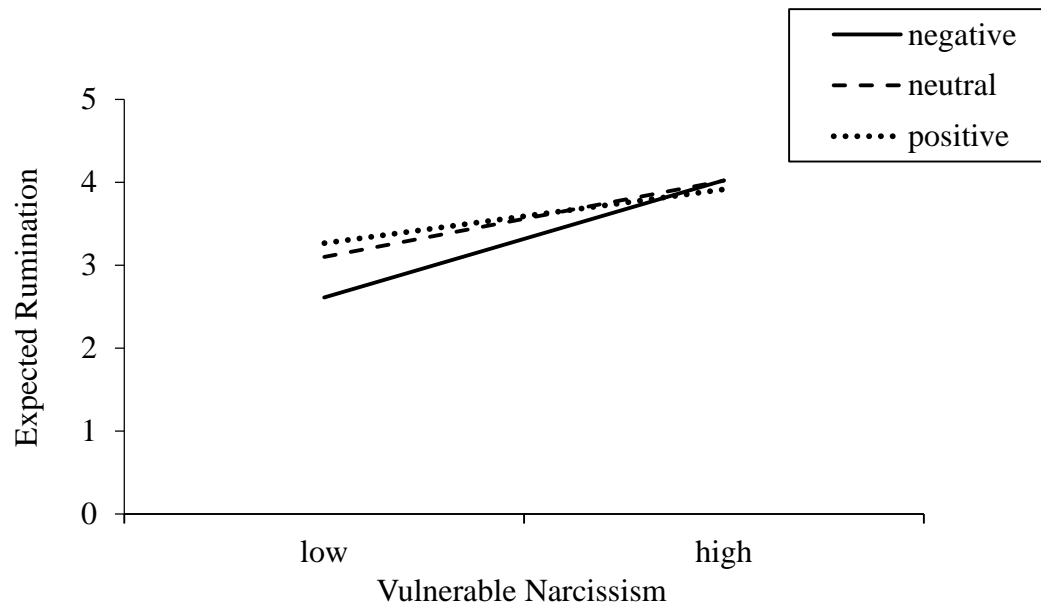


Figure 8. Study 2: Main effect of vulnerable narcissism on expected rumination.

Table 3

*Study 2: Zero-order correlations*

Measure	1	2	3	4	5	6
1.Vulnerable narcissism						
2.Self-esteem	-.63**					
3.Entitlement	.42**	.10				
4.Entity belief	.31**	-.12*	.20**			
5.Negative affect (SAM)	.21**	-.24**	-.01	.00		
6.Negative affect (PANAS)	.46**	-.42**	.16**	.18**	.45**	
7.Expected rumination	.33**	-.16**	.27**	.20**	.07	.33**

*Note.*  $N = 300$

\* $p < .05$ , \*\* $p < .01$  (two-sided)

**Appendix Study 3**

Table 4

*Study 3: Means and Standard Deviations*

	no feedback	negative feedback	positive feedback
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	36.75 (11.90)	38.75 (12.93)	39.83 (12.07)
Vulnerable narcissism	60.38 (15.90)	61.95 (15.34)	59.06 (16.06)
Self-esteem	29.21 (6.68)	30.15 (6.08)	30.33 (6.55)
Psychological entitlement	30.69 (10.66)	29.77 (11.15)	27.74 (10.87)
Entity belief	9.53 (4.15)	9.12 (4.30)	8.96 (4.61)
Importance to perform well*	5.65 (1.41)	5.47 (1.38)	5.61 (1.27)
Self-evaluation*	3.17 (1.13)	2.86 (1.10)	2.99 (1.17)
Negative affect (SAM)	4.58 (1.84)	6.24 (2.10)	2.80 (1.81)
Negative affect (PANAS)	16.93 (7.10)	18.64 (7.98)	12.57 (4.47)
Expected rumination	3.71 (1.83)	3.46 (1.89)	3.73 (1.75)

\*In Study 3 this variable ranged from 1 to 7.



Table 5

*Study 3: Zero-order correlations*

Measure	1	2	3	4	5	6
1.Vulnerable narcissism						
2.Self-esteem	-.59**					
3.Entitlement	.34**	.09				
4.Entity belief	.26**	-.10	.25**			
5.Negative affect (SAM)	.20**	-.17**	.06	.00		
6.Negative affect (PANAS)	.48**	-.35**	.23**	.11	.46**	
7.Rumination	.31**	-.13*	.23**	.05	.13*	.38**

*Note.*  $N = 301$

\* $p < .05$ , \*\* $p < .01$  (two-sided)

**Appendix Study 4***Maladaptive Covert Narcissism Scale (Cheek, Hendin, & Wink, 2013) – German Translation*

Bitte beantworten Sie die folgenden Fragen auf Ihre Gefühle und Ihr Verhalten bezogen. Bitte beantworten Sie die Fragen auf einer Skala von 1 (*stimme gar nicht zu*) bis 7 (*stimme voll zu*). Versuchen Sie, spontan zu antworten.

- 1) Meine Gedanken kreisen häufig um meine persönlichen Angelegenheiten, meine Gesundheit, meine Bedürfnisse oder Beziehungen zu anderen.
- 2) Wenn ein anderer mich kritisiert oder ins Lächerliche zieht, bin ich sehr schnell verletzt.
- 3) Wenn ich einen Raum betrete, werde ich selbstbewusst und habe das Gefühl, dass alle auf mich schauen.
- 4) Ich teile ungern die Anerkennung eines Erfolges mit anderen.
- 5) Ich habe das Gefühl, dass mir meine eigene Probleme reichen. Die Probleme anderer sind mir dann zu viel.
- 6) Ich habe das Gefühl, dass sich mein Temperament von den meisten anderen Leuten unterscheidet.
- 7) Ich nehme Kritik von anderen häufig persönlich.
- 8) Ich beschäftige mich viel mit meinen Interessen und vergesse dabei die anderen um mich herum.
- 9) Ich finde es unangenehm, mich in einer Gruppe aufzuhalten, es sei denn es gibt mindestens eine Person in der Gruppe, von der ich weiß, dass sie mich mag.
- 10) Ich bin, ohne es zu zeigen, häufig genervt, wenn andere Leute mit ihren Problemen zu mir kommen und meine Zeit und mein Mitgefühl beanspruchen.
- 11) Ich beneide sehr gut aussehende Menschen um ihr Äußeres.
- 12) Ich fühle mich schnell gedemütigt, wenn mich jemand kritisiert.
- 13) Ich verstehe nicht, warum andere Menschen häufig nicht meine Stärken erkennen.
- 14) Ich finde andere Menschen entweder großartig oder blöd.
- 15) Manchmal habe ich Gewaltfantasien, ohne zu wissen warum.
- 16) Ich reagiere häufig emotional auf Erfolg und Misserfolg.
- 17) Ich habe Sorgen und Probleme, die kein anderer versteht.
- 18) Ich versuche Ablehnung auf alle Fälle zu vermeiden.
- 19) Einige meiner Freunde würden erschrecken, wenn sie meine geheimen Gedanken und Gefühle kennen würden.
- 20) Ich führe häufig Beziehungen, in denen ich die andere Person abwechselnd vergöttere oder verachte.
- 21) Ich fühle mich manchmal allein und unruhig, selbst wenn ich mit einer Gruppe Freunden unterwegs bin.
- 22) Andere, die haben was mir fehlt, mag ich nicht.
- 23) Niederlagen und Enttäuschungen ärgern mich sehr, aber ich versuche es nicht zu zeigen.

Table 6

*Study 4: Means and Standard Deviations*

	MCII	Dwelling
	<i>M (SD)</i>	<i>M (SD)</i>
Vulnerable narcissism	107.20 (10.68)	105.65 (11.32)
Self-esteem	26.85 (3.20)	26.05 (5.43)
Importance to perform well	5.10 (1.17)	5.50 (1.36)
Self-evaluation	3.10 (0.97)	3.15 (1.23)
Expectancy of negative feedback	4.60 (1.14)	4.65 (1.46)
Expected disappointment	4.50 (1.57)	5.00 (1.89)
Importance of wish	5.45 (1.32)	5.85 (1.14)
Expectancy of wish fulfillment	5.00 (1.41)	4.45 (1.82)

**IQ-Tests bei Bewerbungen: Je schlauer, desto Chef**

*Was unterscheidet Top-Kräfte von 08/15-Mitarbeitern? Glück, Skrupellosigkeit, emotionales Geschick? Auch, aber weniger, als man denkt. Köpfchen zählt! Deshalb sollten Firmen den IQ von Bewerbern testen.*

[...]In der Tat: Mit der Intelligenz scheinen die Deutschen so ihre Probleme zu haben. Wenn man versucht, mit Freunden oder Kollegen darüber zu sprechen, wird schnell abgelenkt, höhnisch gelacht, bestimmt reißt jemand ein Witzchen. Die meisten Deutschen kennen ihren IQ nicht. Und die wenigen anderen behalten ihn lieber für sich. Im Zweifel würde ein Mitarbeiter wohl lieber sein Gehalt als seinen IQ preisgeben.

Der Gedanke, dass sich Geisteskraft mittels eines Messwertes ausdrücken lässt, löst offenbar allgemeines Unbehagen aus. Ist der Mensch nicht viel mehr als sein IQ? Was zählt schon Intelligenz, wenn jemand ein Arschloch ist? Und kommt es nicht im Leben, auch im Berufsleben, auf ganz andere Fähigkeiten an?

Wie wichtig ist sie also, die Intelligenz? Ist sie nur ein überflüssiger Messwert, ersonnen von Psychologen, die ihre Existenzberechtigung daraus ziehen, Menschen irgendwie in Schubladen zu sortieren? Borderliner versus Bodenständige, Ehrgeizlinge versus Antriebsschwache, und eben: Oberschlaue versus Dummerjane?

Oder ist die Intelligenz das Ideal, die innere Kraft, die, wenn ausreichend vorhanden, dem Menschen erst Esprit, Glanz, Attraktivität verleiht?

Viele zweifeln bereits daran, dass sie überhaupt existiert: die eine Intelligenz eines Menschen, die sich messen und in einem Quotienten abbilden lässt - betrage dieser nun 100 wie bei einem durchschnittlichen Testteilnehmer oder liege er eben weit darüber wie bei Thomas Wolf.

Es ist unbekannt, ob dies aus Frust über den eigenen IQ geschah, aber manche Autoren haben sich an einer Ausweitung der Intelligenzzone versucht. Die soziale Intelligenz ist ihnen zufolge wichtiger als die kognitive, der EQ bedeutsamer als der IQ. In den letzten 15 bis 20 Jahren habe es die Tendenz gegeben, "jede Begabung, jede Fertigkeit einer Person auf unterschiedlichen Gebieten als eine Form von Intelligenz zu bezeichnen", resümiert die renommierte Zürcher Forscherin Elsbeth Stern mit ihrem Co-Autor Aljoscha Neubauer in einem neuen Buch zur Intelligenz (siehe Buchtipp).

Zuletzt seien immer "absurdere Vorschläge" gemacht worden, schreiben die beiden Forscher. "Da war von einer Party-Intelligenz die Rede, von kosmischer Intelligenz bis zur sexuellen Intelligenz, frei nach dem Motto: Jeder, der irgendeine Disziplin (vermeintlich) gut beherrscht, kreiert sich eine Form der Intelligenz, in der er (oder sie) dann glänzen kann."

[...]Intelligenz bezieht sich, so sieht es die seriöse Wissenschaft, auf die kognitiven Fähigkeiten. "Intelligenz ist eine sehr allgemeine geistige Kapazität, die unter anderem die Fähigkeit umfasst, Schlüsse zu ziehen, zu denken, zu planen, Probleme zu lösen, abstrakt zu denken, komplexe Ideen zu verstehen, schnell zu lernen und aus Erfahrung zu lernen" - das schrieben führende Forscher, als sie 1994 eine gemeinsame Definition versuchten.

Wenn Forscher heute von Intelligenz sprechen, ist oft vom G-Faktor die Rede: dem Generalfaktor oder Allgemeinen Faktor der Intelligenz. Die Bezeichnung geht zurück auf den

britischen Psychologen Charles Spearman, der die Leistungen von Schülern in verschiedenen Fächern verglich. Nach seiner Beobachtung waren viele Schüler in vielen Fächern jeweils ähnlich gut oder schlecht; wer Mathe kann, jongliert auch souveräner mit Sprache. Darauf baute Spearman seine Theorie von der allgemeinen Intelligenz.

Bleibt die Frage, wie wichtig dieser G-Faktor eigentlich ist. Nicht so sehr, könnte man meinen, wenn man sich am Arbeitsplatz umguckt. Da wimmelt es doch vor Gegenbeispielen, oder? All die Dummen, die nach oben kommen, und die Schlaunen, die scheitern? Schnell entsteht der Eindruck: Intelligenz ist nicht schädlich, aber zu viel sollte es vielleicht dann doch nicht sein. Und schließlich entscheiden in Wahrheit ganz andere Faktoren: Fleiß, Charme, Skrupellosigkeit, Manieren, Netzwerk, Geschlecht oder auch Glück.

Das ist der Eindruck, aber die Empirie kommt zu einem anderen Ergebnis. Wer wissen will, wie wichtig Intelligenz für den beruflichen Erfolg ist, kann Jochen Kramer fragen. Der Wissenschaftler, heute an der Universität Tübingen tätig, fasste 2009 in einer Metaanalyse nicht weniger als 244 Studien aus Deutschland zusammen. Und bestätigte eine Erkenntnis, die für die USA schon zuvor gewonnen worden war: Wer intelligenter ist, ist erfolgreicher.

Fünf Jahre lang hatte Kramer die Daten für seine Dissertation zusammengetragen. Das Ergebnis, ganz klar: "Je intelligenter ein Mitarbeiter ist, desto eher liefert er gute Arbeit und ist beruflich erfolgreich." Eine Erkenntnis, die andere Forscher nicht überraschen kann, wohl aber alle, die ihre Chefs für Idioten und sich selbst für overschlau halten. Ihnen bleibt nur die tröstliche Erkenntnis, dass solche Studien ja keine Gültigkeit im Einzelfall beanspruchen.

Metaanalysen schließen nicht aus, dass ein Dummkopf zur rechten Zeit am richtigen Ort war und Karriere machte, während der hochbegabte Kollege mit fiesen Mitteln ausgebootet wurde. Aber wahrscheinlicher ist eben ein anderer Verlauf: Der Dumme bleibt unten, der Schlaue kommt nach oben.

Das gilt laut Wissenschaftlern auch in Berufen, die gemeinhin als nicht sonderlich anspruchsvoll angesehen werden. Ob jemand als Postbote Erfolg hat oder als Müllmann reüssiert, ist keineswegs unabhängig von seiner Intelligenz. Noch ausgeprägter zeigt sich der statistische Zusammenhang bei komplexen Berufen, in denen Anforderungen häufig wechseln: Sag mir deinen IQ, und ich sage dir, wie groß deine Erfolgsaussichten sind.

So gesehen liegt es nahe, Bewerber zum Intelligenztest zu bitten. "Bei Personalentscheidungen auf solche Tests zu verzichten und sich stattdessen nur auf den persönlichen Eindruck beim Gespräch zu verlassen, das wäre so ähnlich, als würde ein Arzt seinem Patienten eine Gehirntumoroperation vorschlagen, nur weil dieser über wiederholte und heftige Kopfschmerzen klagt", urteilen die beiden Forscher Elsbeth Stern und Aljoscha Neubauer.

[...]In anderen Ländern scheinen IQ-Tests viel häufiger verwendet zu werden als in deutschen Unternehmen. Die Haltung hierzulande dürfte ziemlich dumm sein. Natürlich sei es sinnvoll, Intelligenz zu testen, sagte Christof Obermann dem "Harvard Business Manager", nachdem er die Dax-100-Unternehmen untersucht hatte. Denn wenn ein Manager "in puncto Komplexitätsbewältigung nur mittelmäßig ist, wird aus ihm wohl nie eine erfolgreiche Führungskraft".

Dass IQ-Tests so selten eingesetzt werden, führt der Wirtschaftspsychologe auch darauf zurück, "dass in Deutschland noch immer das Weltbild der Personaler die Inhalte dominiert -

mit einseitigem Fokus auf Sozialkompetenz", daher die Vorliebe für Rollenspiele oder Gruppendiskussionen. "Intelligenz- und Persönlichkeitstests dagegen galten lange als Geheimwissen der Psychologen", so Christof Obermann.

[...]Intelligenztests, gepaart etwa mit strukturierten Interviews, brächten noch bessere Ergebnisse. Dann wäre der Nutzen deutlich höher, bei 26 Millionen Euro. Eine der führenden Personalberatungsfirmen Deutschlands, Kienbaum, weiß um den Wert von IQ-Prüfungen. Aber Hans Ochmann, Mitglied der Geschäftsleitung, kennt auch die Vorbehalte. "Wir tun uns hierzulande schwer mit dem Elitenbegriff", sagt er. Den Hochbegabten stehen viele Menschen gegenüber, deren Intelligenz sich auch durch Weiterbildung nicht verbessern lässt. Aber diese Unterschiede, so Ochmann, würden in Deutschland nicht so gern akzeptiert, während US-Amerikaner damit ganz selbstverständlich umgingen.

Source: SPIEGEL JOB 1/2013

<http://www.spiegel.de/karriere/intelligenz-und-iq-tests-sollten-beim-berufseinstieg-wichtiger-werden-a-926059.html>

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